

**AD-A240 314**



**DTIC**

**SELECT**

**SEP 3 1991**

**JSC-25128**

①

# **CATALOG OF SPACE SHUTTLE EARTH OBSERVATIONS HANDHELD PHOTOGRAPHY**

## **SPACE TRANSPORTATION SYSTEM 37 (STS-37)**

**Mission Dates: April 5 Through 11, 1991**

**Flight Science Support Office  
Solar System Exploration Division  
Space and Life Sciences Directorate**



**National Aeronautics and  
Space Administration  
Lyndon B. Johnson Space Center  
Houston, Texas 77058**

**91-09355**



**91 8 30 019**

**LESC-29483**

# CATALOG OF SPACE SHUTTLE EARTH OBSERVATIONS HANDHELD PHOTOGRAPHY

**SPACE TRANSPORTATION SYSTEM 37 (STS-37)**

**Mission Dates: April 5 Through 11, 1991**

**Job Order J4-S10**



Approved For	
By	✓
Position	
Date	
Distribution	
Collection Notes	
Dist	Available/er
A-1	Special

**Prepared By**

**Raymond M. Nelson  
Kimberly J. Willis  
William J. Daley  
Fred R. Brumbaugh**

**Lockheed Engineering & Sciences Company**

**For**

**Flight Science Support Office  
Solar System Exploration Division  
Space and Life Sciences Directorate**

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION  
LYNDON B. JOHNSON SPACE CENTER  
HOUSTON, TEXAS 77058**

**August 1991**

**LESC-29483**

# CATALOG OF SPACE SHUTTLE EARTH OBSERVATIONS HANDHELD PHOTOGRAPHY

SPACE TRANSPORTATION SYSTEM 37 (STS-37)

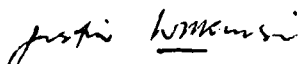
Mission Dates: April 5 Through 11, 1991

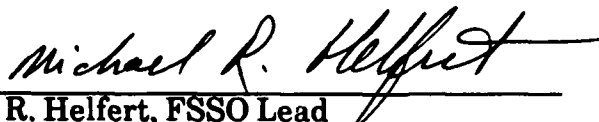
Job Order J4-S10

APPROVED BY

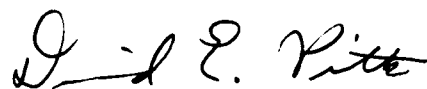
LOCKHEED

NASA

  
\_\_\_\_\_  
M. J. Wilkinson, Supervisor  
Earth Observations Section

  
\_\_\_\_\_  
M. R. Helfert, FSSO Lead  
Mission Scientist  
Flight Science Support Office

  
\_\_\_\_\_  
R. W. Payne, Manager  
Flight Science Support Department

  
\_\_\_\_\_  
D. E. Pitts, Manager  
Flight Science Support Office



Lockheed Engineering & Sciences Company  
2400 NASA Road 1  
Houston, Texas 77058-3711



National Aeronautics and Space Administration  
Lyndon B. Johnson Space Center  
Houston, Texas 77058

August 1991

## **PREFACE**

**This document catalogs Space Shuttle handheld Earth observations photography acquired during the Space Transportation System 37 (STS-37) Mission flown April 5 through 11, 1991. The country, geographic location, general quality, cloud coverage, and other descriptors of each frame are provided. The catalog is a product of the Flight Science Support Office at the National Aeronautics and Space Administration, Lyndon B. Johnson Space Center, Houston, Texas.**

**The Flight Science Support Office wishes to acknowledge those STS-37 astronauts who acquired the photographs cataloged in this document: *Steven R. Nagel*, commander; *Kenneth D. Cameron*, pilot; and *Jerome Apt*, *Linda M. Godwin*, and *Jerry L. Ross*, mission specialists.**

**Any reviewer of this catalog who has questions or inquiries about the catalog, the data listings, or the Earth observations program should contact the program manager:**

**Dr. David E. Pitts, Manager  
Flight Science Support Office  
Mail Code: SN15  
Lyndon B. Johnson Space Center  
National Aeronautics and Space Administration  
Houston, TX 77058  
Telephone: (713) 483-5066  
FTS: 525-5066**

**Inquiries regarding the techniques, cameras, and other details related to Earth observations aboard STS-37 should be forwarded to the lead mission scientist at the address below:**

**Dr. Michael R. Helfert  
Flight Science Support Office  
Mail Code: SN15  
Lyndon B. Johnson Space Center  
National Aeronautics and Space Administration  
Houston, TX 77058  
Telephone: (713) 483-5333  
FTS: 525-5333**



## CONTENTS

Section	Page
TABLES .....	vi
FIGURES .....	vi
ACRONYMS AND ABBREVIATIONS .....	vii
1. INTRODUCTION .....	1-1
1.1 <u>EARTH OBSERVATIONS PHOTOGRAPHY</u> .....	1-1
1.2 <u>CATALOGING AND INDEXING</u> .....	1-1
2. ACQUISITION OF EARTH OBSERVATIONS PHOTOGRAPHY ....	2-1
3. PHOTOGRAPHY NUMBERING, SOURCES, AND ORDERING PROCEDURES .....	3-1
3.1 <u>NUMBERING OF PHOTOGRAPHY</u> .....	3-1
3.2 <u>PHOTOGRAPHY SOURCES AND ORDERING PROCEDURES</u> .....	3-1
4. FILM AND CATALOG LISTINGS .....	4-1

## TABLES

Table	Page
1-1 MISSION DATA FOR STS-37 .....	1-2
3-1 PHOTOGRAPHY VIEWING CENTERS .....	3-2
4-1 PHOTOGRAPHIC SUMMARY FOR MISSION STS-37 .....	4-2
4-2 EXPLANATION OF COLUMN HEADINGS USED IN TABLES 4-3 AND 4-4 .....	4-4
4-3 STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME .....	4-5
4-4 STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME .....	4-118

## FIGURES

Figure	Page
2-1 NASA-modified Hasselblad 500 EL/M camera .....	2-2
2-2 Linhof Aero Technika camera .....	2-2
2-3 Location of windows in the Shuttle Orbiter .....	2-3
4-1 Mission STS-37 time sequence per roll of film .....	4-3

## **ACRONYMS AND ABBREVIATIONS**

<b>a.m.</b>	<b>ante meridiem</b>
<b>ASA</b>	<b>American Standards Association</b>
<b>DRM</b>	<b>data recording module</b>
<b>EDT</b>	<b>eastern daylight time</b>
<b>EROS</b>	<b>Earth Resources Observation Systems</b>
<b>ESIC</b>	<b>Earth Sciences Information Center</b>
<b>FSSO</b>	<b>Flight Science Support Office</b>
<b>GMT</b>	<b>Greenwich mean time</b>
<b>in.</b>	<b>inch</b>
<b>JSC</b>	<b>Lyndon B. Johnson Space Center</b>
<b>km</b>	<b>kilometer</b>
<b>mm</b>	<b>millimeter</b>
<b>NASA</b>	<b>National Aeronautics and Space Administration</b>
<b>nmi</b>	<b>nautical mile</b>
<b>OV</b>	<b>orbital vehicle</b>
<b>PDT</b>	<b>Pacific daylight time</b>
<b>STS</b>	<b>Space Transportation System</b>

# **1. INTRODUCTION**

## **1.1 EARTH OBSERVATIONS PHOTOGRAPHY**

In support of the acquisition of Earth observations photography by Shuttle astronauts, the Flight Science Support Office (FSSO) at the National Aeronautics and Space Administration, Lyndon B. Johnson Space Center (NASA-JSC) coordinates and trains crews in Earth and environmental sciences, provides real-time mission support, and catalogs the handheld photography. Space Shuttle crews are briefed on geological and environmental phenomena of scientific interest and on the basic techniques used to acquire photography over specific sites. During each mission, scientists monitor the Earth for events of special interest (such as hurricanes or other major storms, floods, ice packs, fires, and active volcanoes), as well as for environmental conditions of specific interest. Messages to the Shuttle crew requesting photography of an event are coordinated through Mission Control at NASA-JSC.

Specific mission data for Space Transportation System 37 (STS-37) are listed in table 1-1.

## **1.2 CATALOGING AND INDEXING**

This document catalogs Space Shuttle handheld Earth observations photography acquired during Mission STS-37. The country, geographic location, general quality, cloud coverage, and other descriptors of each frame are listed by roll number and by geographic name in section 4, tables 4-3 and 4-4, respectively. This catalog is a product of the FSSO, Solar System Exploration Division, Space and Life Sciences Directorate at NASA-JSC, Houston, Texas. Support has been provided by Lockheed Engineering & Sciences Company, Houston, Texas, under Contract NAS 9-17900.

Cataloging of Earth-looking photography from this mission was accomplished by R. M. Nelson, K. J. Willis, W. J. Daley, and F. R. Brumbaugh of Lockheed Engineering & Sciences Company. Additional contributors to this report include V. S. Whitehead, D. L. Amsbury, M. R. Helfert, K. P. Lulla, and D. E. Pitts of NASA-JSC, and L. P. Boedeker, S. G. Ackleson, C. A. Evans, and M. J. Wilkinson of Lockheed Engineering & Sciences Company.

**TABLE 1-1.- MISSION DATA FOR STS-37**

<b>Launch:</b>	<b>April 5, 1991; 1422 GMT (10:22 a.m. EDT); from John F. Kennedy Space Center, Florida</b>	
<b>Landing:</b>	<b>April 11, 1991; 1355 GMT (6:55 a.m. PDT); at Edwards Air Force Base, California</b>	
<b>Orbits:</b>	<b>91</b>	
<b>Vehicle:</b>	<b>Atlantis (OV-104)</b>	
<b>Altitude:</b>	<b>243 nmi (445 km) nominal</b>	
<b>Inclination:</b>	<b>28.5°</b>	
<b>Crew:</b>	<b>Commander</b>	<b>- Steven R. Nagel</b>
	<b>Pilot</b>	<b>- Kenneth D. Cameron</b>
	<b>Mission specialists</b>	<b>- Jerome Apt</b>
		<b>- Linda M. Godwin</b>
		<b>- Jerry L. Ross</b>

## 2. ACQUISITION OF EARTH OBSERVATIONS PHOTOGRAPHY

The photography described in this catalog was obtained using three types of cameras: Hasselblad, Linhof, and Nikon F4. The NASA-modified Hasselblad 500 EL/M 70-mm cameras (figure 2-1) were equipped with Zeiss 50-mm CF Distagon f 4.0, 100-mm CF Planar f 3.5, and 250-mm CF Sonnar f 5.6 lenses. Kodak Ektachrome Professional 5017 [American Standards Association (ASA) 64] standard base film and Kodak Aerochrome Color Infrared 2443 (ASA 160) film were used in the Hasselblad cameras. The Linhof Aero Technika camera (figure 2-2) was equipped with interchangeable Linhof 90-mm Super Angulon f 5.6 and 250-mm Tele-Arlon f 5.6 lenses. The film used for the latter camera was 5-in. Kodak Ektachrome QX 868 (ASA 64), natural color (5017 emulsion), thin base.<sup>1</sup> The Nikon F4 35-mm camera was provided with interchangeable 35-to-70-mm zoom, 28-mm f 2.8, and 20-mm f 2.8 autofocus lenses. The film used in the Nikon F4 was 35-mm Kodak Ektachrome Professional 5017 standard base film. All photographs were taken through the windows of the Shuttle Orbiter (figure 2-3).

Data recording modules (DRM's) were installed on the camera magazines. The Hasselblad and Linhof DRM's recorded the date, time to the nearest second in Greenwich mean time (GMT), DRM number, frame number, and mission number. These modules can be removed by the crew and reinstalled on other magazines when magazines are flown without a module. The DRM on the Nikon F4 camera magazine, however, recorded only the day, hour, and minute.

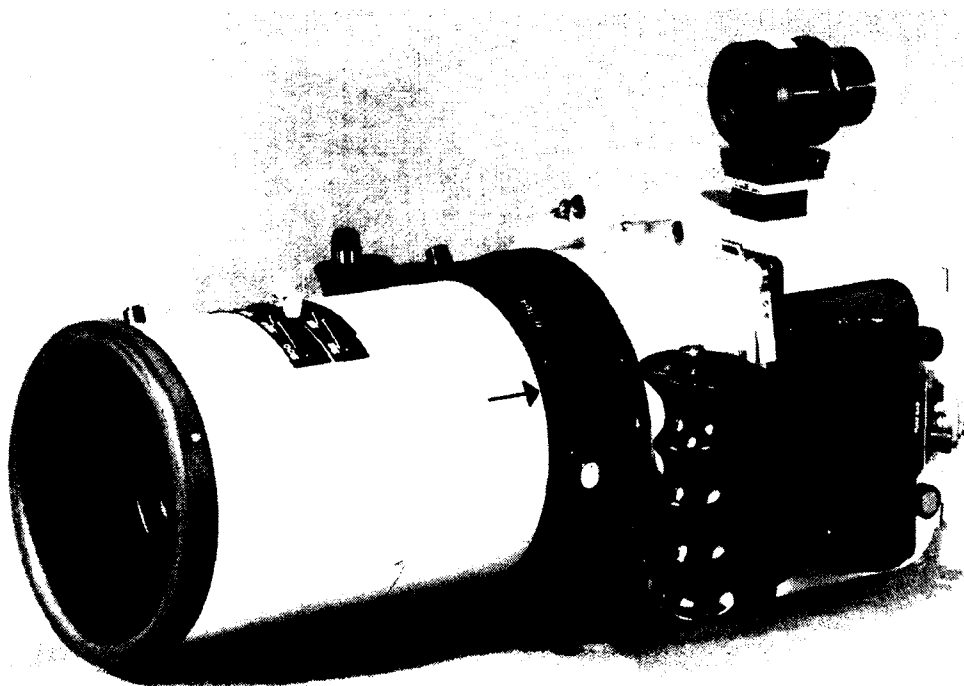
The date and time imaged on each photograph by the DRM are used in conjunction with orbital mechanics data recorded during the mission to compute the Orbiter nadir position in latitude and longitude, the orbit, the altitude, and the sun elevation and azimuth for each camera exposure. The data for the Hasselblad and Linhof are computed for each second of time, while the data for the Nikon F4 can be determined only for each minute (zero seconds). Consequently, the frames recorded by the Nikon F4 during the period of the same minute have the same data. The data are described further in section 4, table 4-2, and are listed in tables 4-3 and 4-4.

---

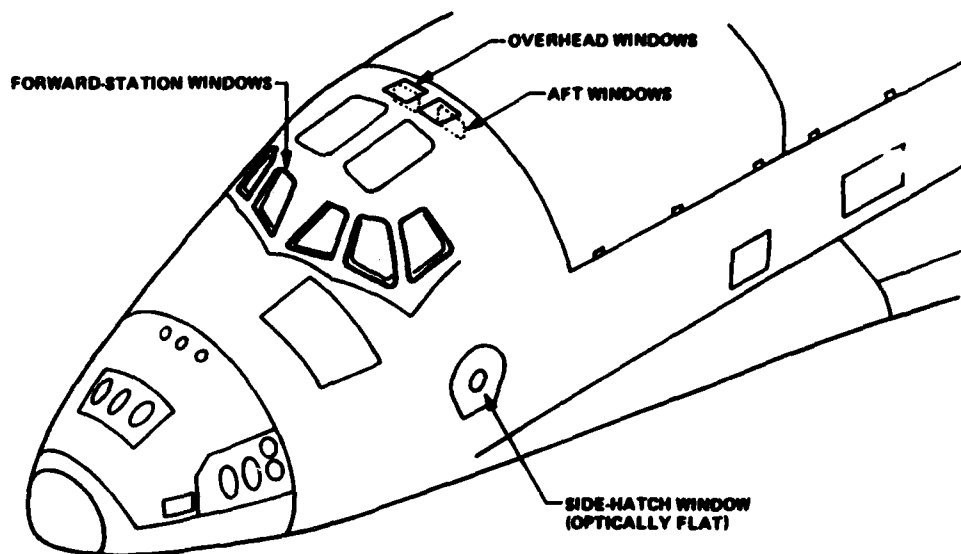
<sup>1</sup> QX 868 has the same emulsion as Professional 5017 film, except it is coated on a thin base material to provide more frames per roll.



**Figure 2-1.- NASA-modified Hasselblad 500 EL/M camera.**



**Figure 2-2.- Linhof Aero Technika camera.**



**Figure 2-3.- Location of windows in the Shuttle Orbiter.**



### **3. PHOTOGRAPHY NUMBERING, SOURCES, AND ORDERING PROCEDURES**

#### **3.1 NUMBERING OF PHOTOGRAPHY**

Photographs are ordered using the mission, roll, and frame numbers as listed in section 4, tables 4-3 and 4-4. For example, STS-37-74-51 is the photo-ordering number for frame 51 of roll 74 from Mission STS-37.

#### **3.2 PHCTOGRAPHY SOURCES AND ORDERING PROCEDURES**

Earth-viewing Shuttle photography may be obtained from the following sources:

U.S. Geological Survey  
EROS Data Center  
Sioux Falls, SD 57198  
Telephone: (605) 594-6151

Technology Applications Center  
University of New Mexico  
Albuquerque, NM 87131  
Telephone: (505) 277-3622

Media Services Branch  
Still Photography Library  
NASA Lyndon B. Johnson Space Center  
P.O. Box 58425, Mail Code AP3  
Houston, TX 77258  
Telephone: (713) 483-4231

The FSSO recommends that you visit a viewing center to select the image best satisfying your requirements before ordering a photograph. In addition to the sources listed above, table 3-1 provides a list of viewing centers. The Earth Sciences Information Center (ESIC), U.S. Geological Survey, has six branches currently equipped with Shuttle photography microfilm and catalogs. Other organizations similarly equipped are the NASA Ames Research Center, California; the Library of Congress; the University of California at Santa Barbara; the Lunar and Planetary Institute, Houston; and the Smithsonian Institution. These centers provide excellent browse/viewing capabilities helpful in ordering photographs.

### **TABLE 3-1.- PHOTOGRAPHY VIEWING CENTERS**

**[All of these centers receive microfilm and catalogs.]**

#### **NASA - NASA DATA FACILITY**

Bldg. 240, Rm. 219 (M.S. 240-6)  
NASA Ames Research Center  
Moffett Field, CA 94305  
(415) 604-6252

#### **U.S. GOVERNMENT - LIBRARY OF CONGRESS**

Geography & Map Division  
Rm. B-01, Library of Congress  
Madison Memorial Bldg.  
1st and C Streets SE  
Washington, D.C. 20540  
(202) 707-6277

#### **UNIVERSITY ESIC AFFILIATE**

Map and Image  
Laboratory and Library  
University of California  
Santa Barbara, CA 93106  
(805) 893-2779/(805) 893-4049

#### **LUNAR AND PLANETARY INSTITUTE**

Planetary Image Center  
3303 NASA Rd. 1  
Houston, TX 77058  
(713) 486-2136

#### **SMITHSONIAN INSTITUTION**

Air and Space Museum  
Archives Division, Rm. 3100  
6th and Independence Ave., SW  
Washington, D.C. 20560  
(202) 357-3133

#### **EARTH SCIENCE INFORMATION CENTERS (ESIC'S)**

##### **U.S. GEOLOGICAL SURVEY**

##### **Anchorage-ESIC**

4230 University Dr.  
Rm. 101  
Anchorage, AK 99508-4664  
(907) 786-7011/FTS (907) 271-4320

##### **Lakewood-ESIC**

Box 25046, Federal Center (M.S. 504)  
Denver, CO 80225  
(303) 236-5829/FTS 776-5829

##### **Menlo Park-ESIC**

Rm. 3128, Bldg. 3 (M.S. 532)  
345 Middlefield Rd.  
Menlo Park, CA 94025  
(415) 329-4390/FTS 459-4390

##### **Reston-ESIC**

507 National Center  
Reston, VA 22092  
(703) 648-6045/FTS 959-6045

##### **Rolla-ESIC**

1400 Independence Rd.  
Rolla, MO 65401  
(314) 341-0851/FTS 759-0851

##### **Stennis Space Center-ESIC**

Bldg. 3101  
Stennis Space Center, MS 39529  
(601) 688-3544/FTS 494-3544

## **4. FILM AND CATALOG LISTINGS**

A diagram illustrating time sequence per roll of film exposed during Mission STS-37 is presented in figure 4-1, and a compact photographic summary correlating roll numbers with film used during the mission is provided in table 4-1.

The photography is cataloged and presented in two listings, with table 4-2 providing an explanation of the column headings used in the listings in tables 4-3 and 4-4. Table 4-3 is listed by roll/frame sequence, and table 4-4 is listed by geographic name.

As depicted in figure 4-1, many of the rolls were exposed during the same time period, generally over the same subject area, often with different focal length lenses, and occasionally with different types of film. Therefore, a user can easily search table 4-3 or 4-4 either to correlate different focal length photography taken at approximately the same time over the same subject or to compare natural color with color infrared film.

**TABLE 4-1.- PHOTOGRAPHIC SUMMARY  
FOR MISSION STS-37**

<b>ROLL NUMBERS</b>	<b>TYPE OF FILM</b>	<b>COMMENTS</b>
<b>HASSELBLAD CAMERAS WITH DRM</b>		
71-86 93-99	Kodak natural color Ektachrome Professional 5017, ASA 64, standard base	Rolls 84, 94, and 96 had no time data.
87-92	Kodak Aerochrome Color Infrared 2443, ASA 160	
<b>LINHOF CAMERA WITH DRM</b>		
151-153	Kodak natural color Ektachrome QX 868 (5017 emulsion), ASA 64, thin base	
<b>NIKON F4 CAMERA WITH DRM</b>		
8-10, 12-16, 38-42, 44-46, 56	Kodak natural color Ektachrome Professional 5017, ASA 64, standard base	Only frames with Earth observations were plotted.

**NOTE:** Of the total 4486 frames of Hasselblad, Linhof, and Nikon photography acquired during Mission STS-37, 4283 frames were Earth viewing.

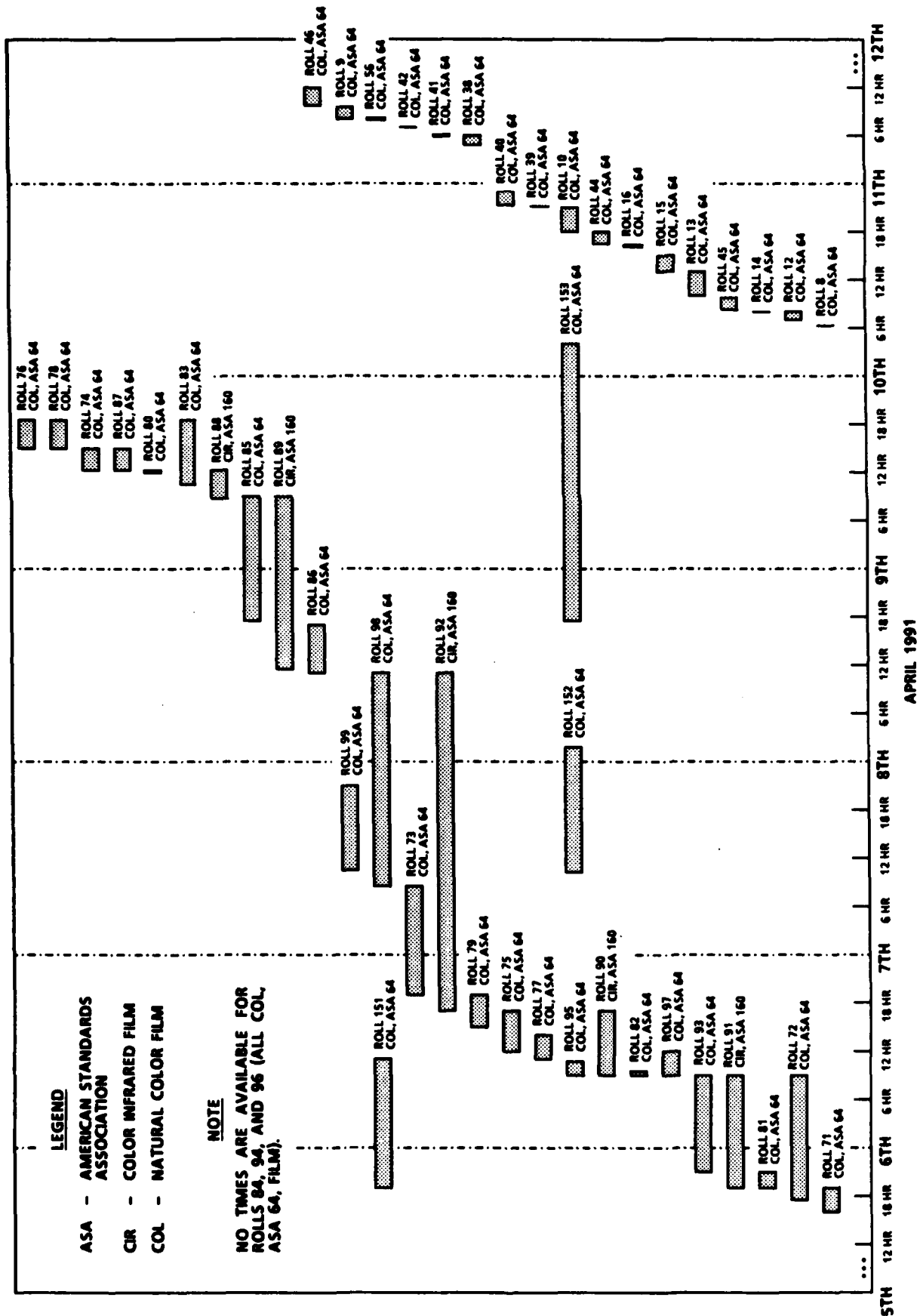


Figure 4-1.- Mission STS-37 time sequence per roll of film.

**TABLE 4-2.- EXPLANATION OF COLUMN HEADINGS USED  
IN TABLES 4-3 AND 4-4**

<p><b>RL</b> Number assigned to each roll of film</p> <p><b>FR</b> Frame number for the photograph</p> <p><b>GEOGRAPHIC NAME</b> Usually the country where the center point of the photograph is located; may also be the name of an island chain, ocean, sea, or a single island if that is the only land in the photograph</p> <p><b>FEATURE</b> Feature of interest within the photograph (e.g., name of a specific landform, cloud pattern, etc.)</p> <p><b>CENTER LAT, LON</b> Latitude and longitude, determined to the nearest tenth to full degree, of the center point of the photograph</p> <p><b>NADIR LAT, LON</b> Coordinates, determined to the nearest tenth of a degree, of the point directly beneath the spacecraft</p> <p><b>CC</b> Percentage of cloud cover</p> <p><b>TL</b> Tilt of the camera from Shuttle nadir:              HO - High oblique (includes the horizon)              LO - Low oblique              NV - Near vertical</p>	<p><b>FL</b> Focal length of lens used:              Hasselblad - 50 mm, 100 mm, 250 mm              Linhof - 90 mm, 250 mm              Nikon F4 - 35-to-70-mm zoom, 28 mm, 20 mm</p> <p><b>E</b> Photographic exposure:              O - Overexposed              N - Normal exposure              U - Underexposed              F - Unsharp focus</p> <p><b>S</b> Possibility of a stereopair, either adjacent frames or frames relatively near on the same roll of film:              N - No              Y - Yes</p> <p><b>DATE</b> Year, month, and day the photograph was taken</p> <p><b>GMT</b> Greenwich mean time of photographic acquisition</p> <p><b>AL</b> Shuttle altitude in nautical miles</p> <p><b>SUN AZ</b> At the Shuttle nadir, the horizontal angle (azimuth) measured from north clockwise to the Sun</p> <p><b>SUN EL</b> Sun elevation angle at Shuttle nadir (measured from horizontal)</p> <p><b>OR</b> Orbit number</p>
--	--

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	LONG	NADIR LAT	LONG	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
8	1	ALGERIA	AHAGGAR MTNS, HAZY	28.6N	0.1E	28.6N	0.1E	10	L0	35	N	N	19910410	063427	244	87	11	73
8	2	ALGERIA	AHAGGAR MTNS, HAZY	28.6N	0.8E	28.6N	0.8E	0	L0	35	N	N	19910410	063437	244	87	12	73
8	3	ALGERIA	TINRHERT PLATEAU	28.6N	1.4E	28.6N	1.4E	0	L0	35	N	N	19910410	063446	244	88	12	73
8	4	ALGERIA	PANORAMA, TINRHERT PLAT.	28.6N	3.5E	28.6N	3.5E	5	H0	35	N	N	19910410	063517	244	89	14	73
8	5	LIBYA	UBARI & MURZUK SAND SEAS	28.4N	7.0E	28.4N	7.0E	20	L0	35	N	N	19910410	063608	244	90	17	73
8	6	ALGERIA	TINRHERT PLAT. AREA	28.3N	8.2E	28.3N	8.2E	10	H0	35	N	N	19910410	063626	244	91	19	73
8	7	ALGERIA	TINRHERT PLAT. AREA	28.3N	8.9E	28.3N	8.9E	40	L0	35	N	N	19910410	063636	244	91	19	73
8	8	LIBYA	MARZUQ DESERT AREA	26.0N	12.5E	26.0N	12.5E	10	L0	35	N	N	19910410	063657	244	92	21	73
8	9	LIBYA	MARZUQ DESERT AREA	26.2N	13.2E	26.2N	13.2E	5	L0	35	N	N	19910410	063738	245	93	23	73
8	10	CHAD	TIBESTI MTN. AREA	22.0N	15.0E	22.0N	15.4E	0	H0	35	N	N	19910410	063812	245	94	25	73
8	11	LIBYA	EL HARUJ EL ASWAD AREA	27.0N	17.0E	27.4N	16.8E	0	L0	35	N	N	19910410	063832	245	95	27	73
8	12	CHAD	TIBESTI MTNS AREA	21.0N	18.5E	27.2N	18.4E	40	H0	35	N	N	19910410	063857	245	96	28	73
8	13	LIBYA	LIBYAN DESERT	26.8N	21.0E	26.8N	21.0E	0	L0	35	N	N	19910410	063935	245	97	31	73
8	14	CHAD	TIBESTI, OVEREXPOSED	26.5N	22.3E	26.5N	22.3E	0	H0	35	N	N	19910410	063955	245	98	32	73
8	15	LIBYA	LIBYAN DESERT	26.0N	23.0E	26.4N	23.1E	0	L0	35	N	N	19910410	064008	245	98	33	73
8	16	CHAD	TIBESTI AREA	26.1N	24.5E	26.1N	24.5E	70	H0	35	N	N	19910410	064028	245	98	34	73
8	17	LIBYA	REBIANA SAND SEA	25.8N	26.0E	25.8N	26.0E	5	L0	35	N	N	19910410	064052	245	99	36	73
8	18	EGYPT	PANORAMA, NILE VALLEY	28.0N	32.0E	25.3N	28.0E	10	H0	35	N	N	19910410	064122	245	100	38	73
8	19	EGYPT	PANORAMA, NILE VALLEY	25.0N	34.0E	25.2N	28.5E	5	H0	35	N	N	19910410	064130	246	100	38	73
8	20	EGYPT	PANORAMA, ARABIAN DESERT	23.0N	36.0E	25.1N	28.7E	5	H0	35	N	N	19910410	064133	246	100	38	73
8	21	EGYPT	GILF KEBIR PLATEAU, NILE	24.0N	30.0E	24.9N	29.6E	0	L0	35	N	N	19910410	064148	246	101	39	73
8	22	EGYPT	GILF KEBIR PLATEAU	23.0N	26.0E	24.8N	30.0E	0	L0	35	N	N	19910410	064153	246	101	39	73
8	23	SUDAN	NUBIAN DESERT AREA, NILE	19.0N	28.0E	24.7N	30.5E	40	H0	35	N	N	19910410	064202	246	101	40	73
8	24	EGYPT	NILE, ASWAN DAM AREA	25.5N	30.0E	24.3N	31.9E	0	L0	35	N	N	19910410	064224	246	101	41	73
8	25	EGYPT	NILE, N. ASWAN DAM AREA	25.5N	33.0E	24.2N	32.5E	0	L0	35	N	N	19910410	064233	246	102	42	73
8	26	SUDAN	OVEREXPOSED, BEND IN NILE	23.0N	34.0E	23.8N	33.8E	0	H0	35	N	N	19910410	064254	246	102	43	73
8	27	EGYPT	S. ARABIAN DESERT	26.0N	35.5E	23.7N	34.2E	5	L0	35	N	N	19910410	064300	246	102	44	73
8	28	RED SEA	SE EGYPT, HIJAZ MASSIVE	24.0N	37.0E	23.5N	34.7E	5	L0	35	N	N	19910410	064308	246	102	44	73
8	29	RED SEA	HIJAZ MASSIVE	25.0N	37.0E	23.4N	35.3E	5	L0	35	N	N	19910410	064317	246	103	45	73
8	30	RED SEA	HIJAZ MASSIVE	25.0N	37.0E	23.1N	36.2E	0	L0	35	N	N	19910410	064332	246	103	46	73
8	31	RED SEA	HIJAZ MASSIVE	24.0N	37.0E	22.8N	37.0E	5	L0	35	N	N	19910410	064345	246	103	47	73
8	32	RED SEA	HIJAZ MASSIVE	24.0N	37.0E	22.7N	37.5E	5	L0	35	N	N	19910410	064353	246	103	47	73
8	33	SUDAN	PANORAMA	26.0N	38.0E	22.2N	38.8E	40	H0	35	N	N	19910410	064414	246	104	48	73
8	34	SAUDI ARABIA	N. HIJAZ MASSIVE	26.0N	38.0E	21.7N	40.3E	40	H0	35	N	N	19910410	064439	246	104	50	73
8	35	RED SEA	PANORAMA, N. SUDAN	19.0N	35.0E	21.5N	41.1E	30	H0	35	N	N	19910410	064451	246	104	51	73
8	36	SUDAN	E. NUBIAN DESERT	19.0N	35.0E	21.1N	42.0E	40	L0	35	N	N	19910410	064506	246	105	52	73
8	37		BLANK FRAME															
9	1	AUSTRALIA-SA	AREA W. OF LAKE EYRE	28.0S	134.0E	28.0S	133.2E	20	L0	35	N	N	19910411	081348	245	284	8	89
9	2	AUSTRALIA-SA	AREA W. OF LAKE EYRE	28.0S	134.0E	28.0S	133.4E	20	L0	35	N	N	19910411	081351	245	284	8	89
9	3	AUSTRALIA-SA	AREA W. OF LAKE EYRE	28.0S	135.0E	28.0S	134.1E	0	L0	35	N	N	19910411	081401	245	283	7	89

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	CENTER LON	NADIR LAT	NADIR LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL	OR
9	4	AUSTRALIA-SA	LAKE EYRE AREA	28.5S	137.4E	28.2S	135.7E	0	LO	35	N	N	19910411	081425	245	282	6	89
9	5	AUSTRALIA-SA	AREA NE. LAKE EYRE	27.0S	138.0E	28.3S	137.1E	0	LO	35	N	N	19910411	081445	245	282	4	89
9	6	AUSTRALIA-SA	AREA NE. LAKE EYRE	27.0S	138.0E	28.3S	137.5E	0	LO	35	N	N	19910411	081452	245	282	4	89
9	7	AUSTRALIA-SA	AREA E. OF LAKE EYRE	28.0S	140.0E	28.4S	138.6E	0	LO	35	N	N	19910411	081507	245	281	3	89
9	8	AUSTRALIA-SA	AREA E. OF LAKE EYRE	28.0S	140.0E	28.4S	139.5E	0	LO	35	N	N	19910411	081520	245	281	2	89
9	9	AUSTRALIA-SA	LAKE FROME AREA	30.3S	140.0E	28.5S	140.0E	0	LO	35	N	N	19910411	081528	245	280	2	89
9	10	AUSTRALIA-SA	AREA S. OF LAKE YAMMA	27.5S	142.0E	28.5S	141.4E	0	LO	35	N	N	19910411	081549	245	280	0	89
9	20	ATMOSPHERIC LIMB	CLOUDS			26.0N	21.3W	99	HO	35	N	N	19910411	090940	245	94	27	90
9	21	WESTERN SAHARA	PANORAMIC VIEW	23.0N	14.0W	25.9N	20.4W	20	HO	35	N	N	19910411	090954	245	94	28	90
9	22	WESTERN SAHARA	PANORAMIC VIEW	21.0N	13.0W	25.5N	18.8W	30	HO	35	N	N	19910411	091019	245	95	29	90
9	23	MAURITANIA	PANORAMIC VIEW	20.0N	12.0W	25.0N	16.9W	5	HO	35	N	N	19910411	091048	245	96	31	90
9	24	CANARY ISLANDS	CLOUDS, VORTICES			24.6N	15.3W	99	LO	35	N	N	19910411	091113	245	96	33	90
9	25	CANARY ISLANDS	CLOUDS, VORTICES			24.3N	14.1W	95	HO	35	N	N	19910411	091131	245	96	34	90
9	26	WESTERN SAHARA	COASTAL AREA	24.0N	14.0W	24.0N	13.0W	70	LO	35	N	N	19910411	091149	245	97	35	90
9	27	WESTERN SAHARA	NW. MAURITANIA			23.4N	10.9W	0	HO	35	N	N	19910411	091223	246	97	37	90
9	28	WESTERN SAHARA	NW. MAURITANIA			22.7N	8.6W	0	LO	35	N	N	19910411	091259	246	98	39	90
9	29	MAURITANIA	N CENTRAL AREA			20.8N	3.1W	0	LO	35	N	N	19910411	091430	246	99	45	90
9	30	MALI	N CENTRAL AREA			19.9N	0.7W	0	LO	35	N	N	19910411	091510	246	100	48	90
9	31	MALI	NIGER RIVER, NE. INCL. DELTA	18.0N	1.0W	19.1N	1.5E	0	LO	35	N	N	19910411	091546	246	100	50	90
9	33	CHAD	LAKE CHAD, VRY CLDY	13.0N	14.0E	15.1N	10.5E	80	LO	35	N	N	19910411	091824	247	100	60	90
9	34	ZAIRE	PART OF LAKE ALBERT	2.0N	31.0E	4.4N	30.4E	95	LO	35	N	N	19910411	092433	248	66	80	90
9	35	UGANDA	N. EDGE OF LAKE VICTORIA	0.1N	33.0E	3.2N	32.6E	95	LO	35	N	N	19910411	092514	248	51	82	90
9	36	UGANDA	N. EDGE OF LAKE VICTORIA	0.4S	33.0E	2.8N	33.1E	90	LO	35	N	N	19910411	092525	248	47	82	90
9	37	TANZANIA	LAKE NATRON AREA	2.0S	35.0E	1.8N	34.8E	95	HO	35	N	N	19910411	092557	248	32	82	90
10	1	BRAZIL	SAO TOME CAPE	22.0S	40.0W	23.1S	35.5W	30	HO	35	N	N	19910410	180625	246	293	27	80
10	2	BRAZIL	SAO TOME CAPE	23.0S	39.0W	23.2S	35.1W	30	HO	35	N	N	19910410	180631	246	293	27	80
10	3	USA-HI	HAWAIIAN ISLANDS	21.0N	158.0W	26.2N	167.2W	35	HO	35	N	N	19910410	190807	245	96	30	81
10	4	USA-HI	OAHU, KAUAI, MOLOKAI	21.0N	158.0W	24.2N	158.7W	35	LO	35	N	N	19910410	191019	245	99	38	81
10	5	USA-HI	OAHU, MOLOKAI, MAUI	21.0N	157.0W	23.9N	157.7W	30	LO	35	N	N	19910410	191036	245	100	39	81
10	6	USA-HI	BIG ISLAND OF HAWAII	20.0N	156.0W	22.9N	154.3W	35	LO	35	N	N	19910410	191129	246	101	43	81
10	7	USA-HI	BIG ISLAND OF HAWAII	20.0N	155.0W	22.5N	153.1W	35	LO	35	N	N	19910410	191149	246	101	44	81
10	8	USA-HI	HAWAIIAN ISLANDS	21.0N	157.0W	22.4N	152.7W	35	HO	35	N	N	19910410	191156	246	101	44	81
10	9	PERU	COAST NEAR MOLLENDO	17.0S	73.0W	18.9S	71.1W	20	LO	35	N	N	19910410	193641	247	299	40	81
10	10	PERU	COAST NEAR MOLLENDO	18.0S	72.0W	19.0S	70.8W	20	LO	35	N	N	19910410	193647	247	298	40	81
10	11	PERU	COAST NEAR MOLLENDO	18.0S	72.0W	19.2S	70.3W	20	LO	35	N	N	19910410	193655	247	298	39	81
10	12	BOLIVIA	LAKE POPOO	18.0S	67.0W	19.7S	68.1W	65	LO	35	N	N	19910410	193715	247	298	38	81
10	13	BOLIVIA	UYUNI SALAR	20.0S	68.0W	19.9S	68.6W	55	LO	35	N	N	19910410	193724	247	297	37	81
10	14	BOLIVIA	EAST CENTRAL ANDES	20.0S	65.0W	20.7S	66.5W	65	LO	35	N	N	19910410	193759	247	296	35	81
10	15	CHILE	S. VIEW OF ANDES MTNS.			21.2S	65.1W	60	HO	35	N	N	19910410	193822	247	296	34	81
10	16	ARGENTINA	PILCOMAYO RIVER			21.7S	63.6W	80	LO	35	N	N	19910410	193847	247	295	32	81



TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	NADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR		
10	17	PARAGUAY	CHACO PLAIN, DARK	23.0S	59.7W	55	L0	35	U	N	19910410	193951	247	293	28	81		
10	18	PARAGUAY	CHACO PLAIN, DARK	23.2S	59.0W	40	L0	35	U	N	19910410	194002	247	293	27	81		
10	19	PARAGUAY	CHACO PLAIN, DARK	23.6S	57.6W	25	L0	35	U	N	19910410	194024	247	292	26	81		
10	20	BRAZIL	THUNDERSTORMS	24.0S	56.5W	65	L0	35	U	N	19910410	194042	247	292	25	81		
10	21	BRAZIL	THUNDERSTORMS	24.1S	56.0W	75	L0	35	U	N	19910410	194049	247	292	24	81		
10	22	BRAZIL	PARANA BASIN	24.3S	55.4W	60	L0	35	N	N	19910410	194059	247	291	24	81		
10	23	BRAZIL	PARANA BASIN, CLOUDS	24.8S	53.3W	90	L0	35	N	N	19910410	194132	246	290	22	81		
10	24	BRAZIL	PARANA BASIN, CLOUDS	25.7S	49.3W	85	L0	35	N	N	19910410	194233	246	288	18	81		
10	25	BRAZIL	EASTERN BRAZIL HIGHLANDS	25.9S	48.7W	50	L0	35	N	N	19910410	194243	246	288	17	81		
10	26	ATLANTIC OCEAN	SUNGLINT, CLOUDS	28.1S	33.7W	45	H0	35	N	N	19910410	194628	245	281	3	81		
10	27	ATLANTIC OCEAN	SUNGLINT, CLOUDS	28.6S	26.1W	40	H0	35	N	N	19910410	194818	245	277	-4	81		
12	1	SAUDI ARABIA	EMPTY QUARTER	16.0N	46.0E	20.1N	44.9E	5	L0	35	N	N	19910410	064554	246	105	55	73
12	2	RED SEA	STRAIT OF MANDEB, G. ADEN	13.0N	44.0E	19.9N	45.5E	10	H0	35	N	N	19910410	064604	246	106	56	73
12	3	SAUDI ARABIA	DISSECTED PLAT., G. ADEN	15.0N	48.0E	19.5N	46.5E	5	H0	35	N	N	19910410	064621	247	106	57	73
12	4	SAUDI ARABIA	EMPTY QUARTER, G. ADEN	17.0N	52.0E	19.2N	47.0E	5	H0	35	N	N	19910410	064630	247	106	57	73
12	5	OMAN	EMPTY QUARTER	20.0N	55.0E	19.0N	47.6E	5	H0	35	O	N	19910410	064640	247	106	58	73
12	6	OMAN	WAHIBA SANDS, OMAN MTNS.	23.0N	56.0E	18.9N	47.8E	35	H0	35	N	N	19910410	064643	247	106	58	73
12	7	GULF OF ADEN	STRAIT OF MANDEB	12.0N	46.0E	18.6N	48.7E	10	H0	35	O	N	19910410	064659	247	106	59	73
12	8	SAUDI ARABIA	EMPTY QUARTER	16.0N	48.0E	18.2N	49.6E	0	L0	35	N	N	19910410	064714	247	106	59	73
12	9	OMAN	EMPTY QUARTER, SALALAH	17.0N	53.0E	17.7N	50.8E	5	L0	35	N	N	19910410	064735	247	106	61	73
12	10	OMAN	EMPTY QUARTER, SALALAH	17.0N	54.0E	17.5N	51.1E	5	L0	35	N	N	19910410	064740	247	106	62	73
12	11	OMAN	EMPTY QUARTER, SALALAH	18.0N	53.0E	17.2N	51.8E	5	L0	35	N	N	19910410	064752	247	106	62	73
12	12	OMAN	EMPTY QUARTER, SALALAH	19.0N	54.0E	16.7N	53.0E	5	L0	35	N	N	19910410	064813	247	107	64	73
12	13	GULF OF ADEN	HORN OF AFRICA, SOCOTRA	12.0N	51.0E	16.6N	53.3E	10	H0	35	O	N	19910410	064819	247	107	64	73
12	14	ARABIAN SEA	OMAN COAST, MASIRAH IS.	18.0N	58.0E	16.2N	54.0E	10	H0	35	N	N	19910410	064832	247	107	65	73
12	15	SOMALIA	HORN OF AFRICA, SOCOTRA	11.0N	50.0E	15.9N	54.7E	10	H0	35	O	N	19910410	064843	247	107	66	73
12	16	OMAN	EMPTY QUARTER, SALALAH	18.0N	56.0E	15.6N	55.5E	10	H0	35	N	N	19910410	064857	247	107	67	73
12	21	AUSTRALIA-WA	EIGHTY MILE BEACH	20.0S	122.0E	20.1S	123.0E	30	L0	35	N	N	19910410	070944	246	294	33	73
12	22	AUSTRALIA-WA	EIGHTY MILE BEACH	21.0S	123.0E	20.6S	124.3E	35	H0	35	N	N	19910410	071005	246	294	32	73
12	23	AUSTRALIA-WA	GREAT SANDY DESERT	22.0S	124.0E	20.9S	125.2E	35	H0	35	N	N	19910410	071020	246	294	31	73
12	24	AUSTRALIA-WA	GIBSON D., L. DISAPPOINT	24.0S	123.0E	21.7S	127.4E	30	H0	35	N	N	19910410	071057	246	293	29	73
12	25	AUSTRALIA-WA	L. EYRE, SIMPSON DESERT	27.0S	137.0E	24.5S	136.6E	5	L0	35	N	N	19910410	071216	245	290	24	73
12	27	AUSTRALIA-SA	L. EYRE BASIN, SIMPSON D	28.0S	139.0E	24.7S	137.5E	20	L0	35	N	N	19910410	071338	245	288	19	73
12	28	AUSTRALIA-SA	L. EYRE BASIN, SIMPSON D	28.0S	139.0E	25.7S	141.5E	30	L0	35	N	N	19910410	071440	245	286	15	73
12	29	AUSTRALIA-SA	ANTI ATLAS MTNS.	29.0N	9.0W	27.2N	5.6W	35	H0	35	N	N	19910410	081223	245	95	28	74
12	35	MOROCCO	IGUIDI D., HIGH ATLAS	30.0N	5.0W	26.9N	3.5W	5	L0	35	N	N	19910410	081254	245	96	30	74
12	36	ALGERIA	IGUIDI DESERT	27.0N	4.0W	26.0N	2.3W	0	L0	35	N	N	19910410	081313	245	97	31	74
12	37	ALGERIA	LAKE IRO REGION	11.0N	19.0E	11.3N	16.3E	10	L0	35	N	N	19910410	095830	247	102	75	75
13	1	CHAD	LAKE IRO REGION	10.0N	19.0E	13.4N	18.0E	10	L0	35	N	N	19910410	095901	247	100	77	75
13	2	CHAD	LAKE IRO REGION	10.0N	19.0E	13.4N	18.0E	10	L0	35	N	N	19910410	095901	247	100	77	75

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	CENTER LON	NADIR LAT	NADIR LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
13	3	CENTRAL AFRICAN REP.	CLOUDS			9.7N	19.3E	45	HO	35	N	N	19910410	095928	247	98	79	75
13	4	CENTRAL AFRICAN REP.	CLOUDS			8.6N	21.2E	50	LO	35	N	N	19910410	100002	248	94	81	75
13	5	ZAIRE	CLOUDS			6.5N	25.0E	50	LO	35	U	N	19910410	100113	248	74	85	75
13	6	ZAIRE	CLOUDS			4.8N	28.0E	70	LO	35	U	N	19910410	100210	248	30	86	75
13	7	UGANDA	LAKE VICTORIA REGION	0.0N	32.0E	3.5N	30.2E	70	LO	35	N	N	19910410	100252	248	353	86	75
13	8	KENYA	LAKE RUDOLPH/TURKANA	3.0N	36.0E	2.7N	31.6E	65	HO	35	N	N	19910410	100319	248	338	84	75
13	9	UGANDA	LAKE VICTORIA, KYOGA	1.0N	34.0E	1.9N	32.9E	60	LO	35	N	N	19910410	100344	248	330	83	75
13	10	KENYA	LAKE NATRON, RIFT VALLEY	2.0S	37.0E	0.5N	35.2E	55	HO	35	N	N	19910410	100428	248	321	81	75
13	11	KENYA	EASTERN KENYA, L. NATRON	3.0S	38.0E	0.2N	35.8E	55	HO	35	N	N	19910410	100439	248	319	80	75
13	12	KENYA	FORMOSA BAY, COAST	2.0S	41.0E	1.7S	39.1E	50	HO	35	N	N	19910410	100542	248	314	76	75
14	1		OVEREXPOSED			24.0N	5.8E		LO		O		19910410	081517	246	100	39	74
14	2	ALGERIA	TINRHERT PLAT., MARZUQ D	26.0N	8.0E	24.4N	7.8E	15	LO	35	N	N	19910410	081548	246	101	41	74
14	3	ALGERIA	TINRHERT PLAT., MARZUQ D	23.0N	10.0E	24.2N	8.3E	5	HO	35	N	N	19910410	081556	246	101	41	74
14	4	LIBYA	MARZUQ D., AS-SABAH HILL	26.0N	17.0E	24.1N	8.7E	5	HO	35	N	N	19910410	081603	246	101	42	74
14	5	LIBYA	MARZUQ D., TIBESTI MTS.	25.0N	13.0E	23.7N	10.1E	0	HO	35	N	N	19910410	081625	246	102	43	74
14	6	LIBYA	EL HARUJ EL ASWAD PLAT.	26.0N	18.0E	23.1N	12.3E	0	HO	35	N	N	19910410	081700	246	103	45	74
14	7	LIBYA	MARZUQ DESERT	25.0N	13.0E	22.8N	13.2E	0	LO	35	N	N	19910410	081714	246	103	46	74
14	8	CHAD	TIBESTI MASSIF	21.0N	18.0E	22.4N	14.4E	0	HO	35	N	N	19910410	081733	246	103	47	74
14	9	CHAD	TIBESTI MASSIF	21.0N	18.0E	21.7N	16.6E	0	LO	35	N	N	19910410	081809	246	104	50	74
14	10	LIBYA	REBIANA SAND SEA	24.0N	21.0E	21.5N	17.1E	15	LO	35	N	N	19910410	081818	246	104	50	74
14	11	EGYPT	GILF KEBIR PLATEAU	22.0N	25.0E	21.0N	18.6E	15	HO	35	N	N	19910410	081842	246	104	52	74
14	16		OVEREXPOSED			18.3N	25.3E						19910410	082036	247	106	59	74
14	17	SUDAN	NILE R., NUBIAN DESERT	19.0N	31.0E	18.0N	26.2E	5	HO	35	N	N	19910410	082052	247	106	60	74
14	18	SUDAN	NILE R., KHARTOUM	16.0N	32.0E	17.8N	26.7E	15	HO	35	N	N	19910410	082100	247	106	61	74
14	19	SUDAN	NILE R., NUBIAN DESERT	20.0N	32.0E	17.6N	27.2E	5	HO	35	N	N	19910410	082108	247	106	61	74
14	20	SUDAN	NILE R., NUBIAN DESERT	20.0N	30.0E	17.0N	28.3E	5	HO	35	N	N	19910410	082128	247	106	62	74
14	21	SUDAN	NILE R., KHARTOUM	17.0N	32.0E	16.7N	29.1E	10	LO	35	N	N	19910410	082142	247	106	63	74
14	22	SUDAN	NILE R., KHARTOUM	15.0N	30.0E	16.3N	30.1E	10	LO	35	N	N	19910410	082159	247	106	64	74
14	23	SUDAN	NILE R., KHARTOUM	17.0N	34.0E	15.9N	30.8E	5	LO	35	N	N	19910410	082212	247	106	65	74
14	24	SUDAN	NILE R., RED SEA	15.0N	36.0E	15.5N	31.7E	10	HO	35	N	N	19910410	082227	247	106	66	74
14	25	ETHIOPIA	L. TANA, DANAKIL DEPRESS	15.0N	38.0E	15.2N	32.3E	15	HO	35	N	N	19910410	082238	247	106	67	74
14	26	ETHIOPIA	L. TANA, DANAKIL DEPRESS	14.0N	41.0E	14.6N	33.5E	15	HO	35	N	N	19910410	082300	247	106	68	74
14	27	SUDAN	SUDAN AG., NILE RIVER	14.0N	35.0E	14.2N	34.5E	5	LO	35	N	N	19910410	082317	247	106	69	74
14	28	ETHIOPIA	DANAKIL DEP., ERTA ALE	13.0N	42.0E	13.5N	35.8E	20	HO	35	N	N	19910410	082341	247	105	71	74
14	29	DJIBOUTI	AFAR REGION, ERTA ALE	12.0N	43.0E	12.9N	37.0E	15	HO	35	N	N	19910410	082402	247	105	72	74
14	30	ETHIOPIA	HIGHLANDS, ERTA ALE VOL.	14.0N	39.0E	12.4N	38.1E	20	LO	35	N	N	19910410	082422	247	104	73	74
14	31	GULF OF ADEN	AFAR REGION, RIFT VALLEY	13.0N	46.0E	11.5N	39.7E	15	HO	35	N	N	19910410	082452	247	103	75	74
14	32	DJIBOUTI	AFAR REGION, L. ASSAL	12.0N	43.0E	11.0N	40.7E	15	LO	35	N	N	19910410	082511	247	102	76	74
14	33	SOMALIA	GULF OF ADEN, SOCOTRA	11.0N	50.0E	10.3N	42.0E	15	HO	35	N	N	19910410	082534	247	101	78	74
14	34	SOMALIA	EAST COAST, ARABIAN SEA	8.0N	50.0E	9.7N	43.0E	30	HO	35	N	N	19910410	082554	247	99	79	74

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		MADIR		CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN
				LAT	LONG	LAT	LONG										
14	35	SOMALIA	EAST COAST, ARABIAN SEA	8.0N	49.0E	9.4N	43.6E	30	HO	35	N	N	19910410	082605	247	98	80
14	36	SOMALIA	CARCAR MTNS.	10.0N	47.0E	8.5N	45.3E	30	LO	35	N	N	19910410	082636	247	94	82
14	37	SOMALIA	EAST COAST, ARABIAN SEA	6.0N	49.0E	7.7N	46.8E	35	LO	35	N	N	19910410	082704	247	88	83
15	1	ATLANTIC OCEAN	UNIQUE CLOUD FORMATION			12.2N	33.2W	95	LO	35	N	N	19910410	130455	247	102	72
15	2	BOTSWANA	OKAVANGO SWAMP, SHUA PAN	20.0S	23.0E	16.1S	17.9E	0	LO	35	N	N	19910410	132053	247	300	46
15	3	NAMIBIA	NAMIB DESERT	24.0S	15.0E	16.3S	18.4E	5	HO	35	N	N	19910410	132102	247	300	45
15	4	NAMIBIA	WESTERN KALAHARI DESERT	22.0S	19.0E	16.4S	18.6E	0	LO	35	N	N	19910410	132105	247	300	45
15	5	BOTSWANA	OKAVANGO SWAMP, SHUA PAN	20.0S	25.0E	16.6S	19.0E	0	LO	35	N	N	19910410	132112	247	299	44
15	6	NAMIBIA	NAMIB DES., KARAS MTNS.	27.0S	18.0E	16.8S	19.6E	5	HO	35	N	N	19910410	132123	247	298	44
15	7	ANGOLA	CAPRIVI STRIP	17.0S	23.0E	17.6S	21.4E	5	LO	35	N	N	19910410	132154	247	298	42
15	8	BOTSWANA	MAKGADIKGADI PANS	21.0S	25.0E	18.3S	22.9E	0	LO	35	N	N	19910410	132220	246	298	40
15	9	NAMIBIA	ETOSHA PAN, NW KALAHARI	20.0S	18.0E	18.7S	24.0E	0	HO	35	N	N	19910410	132239	246	297	39
15	10	NAMIBIA	CAPRIVI STRIP	18.0S	24.0E	19.0S	24.8E	0	LO	35	N	N	19910410	132252	246	297	38
15	11	BOTSWANA	ZAMBEZI, LINYANTI RIVERS	18.0S	25.0E	19.2S	25.1E	0	LO	35	N	N	19910410	132257	246	297	38
15	12	BOTSWANA	ZAMBEZI, LINYANTI RIVERS	18.0S	25.0E	19.4S	25.7E	0	LO	35	N	N	19910410	132307	246	297	37
15	13	SWAZILAND	ESCARPMENT	26.0S	32.0E	19.9S	27.0E	10	HO	35	N	N	19910410	132330	246	296	36
15	14	MOZAMBIQUE	OVEREXPOSED			20.2S	27.6E		HO	35	O	N	19910410	132340	246	296	35
15	15	SWAZILAND	LAND USE, ESCARPMENT	27.0S	32.0E	20.3S	28.0E	5	LO	35	N	N	19910410	132347	246	296	35
15	16	SWAZILAND	LAND USE, ESCARPMENT	27.0S	31.0E	20.6S	28.9E	0	LO	35	N	N	19910410	132402	246	295	34
15	17	MOZAMBIQUE	LIMPOPO RIVER	22.0S	33.0E	20.9S	29.6E	5	LO	35	N	N	19910410	132414	246	295	33
15	18	MOZAMBIQUE	LOURENCO MARQUES BAY	26.0S	33.0E	21.4S	31.0E	25	HO	35	N	N	19910410	132437	246	294	31
15	19	REPUBLIC SOUTH AFRICA	NORTHERN DRakensBURG			22.0S	32.6E	25	LO	35	N	N	19910410	132503	246	294	30
15	20	REPUBLIC SOUTH AFRICA	NORTHERN DRakensBURG			22.1S	33.1E	50	LO	35	N	N	19910410	132511	246	293	29
15	21	REPUBLIC SOUTH AFRICA	NORTHERN DRakensBURG			22.4S	33.9E	60	LO	35	N	N	19910410	132524	246	293	28
15	22	MOZAMBIQUE	BAZARUTO IS., SAVE RIVER	21.0S	35.0E	22.9S	35.6E	35	LO	35	N	N	19910410	132551	246	292	27
15	23	MOZAMBIQUE	BAZARUTO IS., SAVE RIVER	22.0S	35.0E	23.0S	35.9E	25	LO	35	N	N	19910410	132556	246	292	26
15	24	MOZAMBIQUE	POELELA LAKE, COAST	25.0S	35.0E	23.8S	38.5E	25	LO	35	N	N	19910410	132637	245	291	24
15	25	MADAGASCAR	SW COAST			24.2S	40.0E	75	HO	35	N	N	19910410	132701	245	290	22
15	26	MADAGASCAR	SW COAST, LINTA RIVER	25.0S	44.0E	24.5S	40.9E	75	LO	35	N	N	19910410	132716	245	290	21
15	27	MADAGASCAR	SW COAST, MENARANDRA R.	25.0S	45.0E	25.1S	43.4E	70	LO	35	N	N	19910410	132755	245	289	19
15	28	MADAGASCAR	S. MADAGASCAR MOUNTAINS			25.4S	44.8E	70	LO	35	N	N	19910410	132816	245	288	17
15	29	MADAGASCAR	S. MADAGASCAR MOUNTAINS			25.6S	45.4E	70	LO	35	N	N	19910410	132825	245	288	17
15	30	INDIAN OCEAN	LINEAR CLOUD FORMATION			26.4S	49.3E	85	HO	35	N	N	19910410	132926	245	286	13
15	31	INDIAN OCEAN	LINEAR CLOUD FORMATION			26.8S	51.4E	90	HO	35	N	N	19910410	132957	245	285	11
15	32	INDIAN OCEAN	THUNDERSTORM			28.3S	64.0E	75	LO	35	N	N	19910410	133304	244	278	-1
15	33	NAMIBIA	BRANDBERG STRUCTURE	21.0S	14.0E	23.7S	14.2E	0	LO	35	N	N	19910410	145959	246	291	25
15	34	NAMIBIA	BRANDBERG STRUCTURE	21.0S	15.0E	24.0S	15.3E	0	LO	35	N	N	19910410	150017	246	291	23
15	35	NAMIBIA	NAMIB DESERT	22.0S	15.0E	24.1S	15.6E	0	LO	35	N	N	19910410	150021	245	291	23
15	36	NAMIBIA	NAMIB DESERT	24.0S	16.0E	24.2S	16.1E	0	LO	35	N	N	19910410	150030	245	290	23
15	37	NAMIBIA	NAMIB DESERT	25.0S	15.0E	24.4S	16.8E	0	LO	35	N	N	19910410	150041	245	290	22

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
16	1	USA-CA	IMPERIAL VAL., SAN DIEGO	34.0N 116.0W	26.0N 118.4W	10	H0	35	N	N	19910410	160125	245	97	32	79
16	2	USA-CA	VIEW N. OF CALIF. COAST	35.0N 121.0W	25.8N 117.2W	15	H0	35	N	N	19910410	160143	245	97	33	79
16	3	MEXICO	N. BAJA PEN., COL. RIVER	31.0N 116.0W	25.5N 115.9W	15	L0	35	N	N	19910410	160203	245	98	34	79
16	4	USA-NV	VIEW N. OF GREAT BASIN	37.0N 115.0W	25.0N 113.9W	15	H0	35	N	N	19910410	160235	246	99	36	79
16	5	MEXICO	CENTRAL BAJA CALIFORNIA	26.0N 112.0W	24.5N 112.0W	5	L0	35	N	N	19910410	160305	246	99	38	79
16	6	MEXICO	SIERRA MADRE OCCIDENTAL	28.0N 109.0W	24.2N 111.0W	0	L0	35	N	N	19910410	160320	246	100	39	79
16	7	MEXICO	SIERRA MADRE OCCIDENTAL	28.0N 108.0W	24.1N 110.7W	5	H0	35	N	N	19910410	160325	246	100	39	79
16	8	MEXICO	GULF OF CALIFORNIA	28.0N 112.0W	23.5N 108.4W	10	H0	35	N	N	19910410	160402	246	101	42	79
16	9	MEXICO	LAKE CHAPEL, FIRES	20.0N 103.0W	23.2N 107.5W	10	L0	35	N	N	19910410	160416	246	101	43	79
16	10	MEXICO	SIERRA MADRE OCCIDENTAL	26.0N 109.0W	22.8N 106.3W	10	H0	35	N	N	19910410	160436	246	101	44	79
16	11	MEXICO	CENTRAL MEXICAN PLATEAU	29.0N 106.0W	22.5N 105.2W	5	H0	35	N	N	19910410	160453	246	102	45	79
16	12	MEXICO	BAJA PEN., G. OF CALIF.	27.0N 112.0W	22.2N 104.3W	20	H0	35	N	N	19910410	160508	246	102	46	79
16	13	MEXICO	SIERRA MADRE OCCIDENTAL	23.0N 105.0W	21.5N 102.4W	20	H0	35	N	N	19910410	160539	246	102	48	79
16	14	MEXICO	SIERRA MADRE ORIENTAL	24.0N 100.0W	21.3N 101.8W	60	L0	35	N	N	19910410	160548	246	102	49	79
16	15	MEXICO	EAST MEXICAN COAST	25.0N 98.0W	20.6N 99.7W	60	H0	35	N	N	19910410	160623	246	103	51	79
16	16	MEXICO	WESTERN MEXICO	25.0N 106.0W	20.4N 99.1W	20	H0	35	N	N	19910410	160633	246	103	51	79
16	17	MEXICO	LAKE CHAPEL, VOLCANOES	21.0N 102.0W	20.0N 98.2W	0	L0	35	N	N	19910410	160649	247	103	52	79
16	18	MEXICO	MEXICO CITY, SMOG	20.0N 99.0W	19.2N 96.3W	5	L0	35	N	N	19910410	160721	247	104	54	79
16	19	MEXICO	COLIMA VOL., L. CHAPEL	19.0N 101.0W	19.1N 95.9W	10	L0	35	N	N	19910410	160727	247	104	55	79
16	20	MEXICO	SIERRA MADRE DEL SUR	17.0N 97.0W	17.0N 90.9W	20	H0	35	N	N	19910410	160854	247	104	60	79
16	21	MEXICO	YUCATAN PENINSULA	20.0N 89.0W	16.8N 90.5W	35	L0	35	N	N	19910410	160901	247	104	61	79
16	22	MEXICO	E. COAST YUCATAN PENIN.	19.0N 88.0W	16.5N 89.7W	55	L0	35	N	N	19910410	160914	247	104	82	79
16	23	MEXICO	YUCATAN PENINSULA	20.0N 88.0W	15.8N 88.3W	40	L0	35	N	N	19910410	160940	247	104	63	79
16	24	MEXICO	S. MEXICO, EL CHICHON V.	16.0N 92.0W	15.6N 87.9W	35	H0	35	N	N	19910410	160947	247	104	64	79
16	25	CUBA	ISLE OF PINES, W. CUBA	22.0N 83.0W	15.2N 87.0W	55	H0	35	O	N	19910410	161002	247	104	65	79
16	26	MEXICO	YUCATAN PENINSULA	19.0N 89.0W	14.5N 85.5W	45	H0	35	N	N	19910410	161029	247	103	66	79
16	27	CUBA	OVEREXPOSED	22.0N 80.0W	13.8N 84.1W	40	H0	35	O	N	19910410	161055	247	103	68	79
16	28	CUBA	JAMAICA, CAYMAN ISLANDS	20.0N 78.0W	11.5N 79.7W	35	H0	35	N	N	19910410	161215	247	100	73	79
16	29	GUYANA	ESSEQUIBO RIVER MOUTH	7.0N 58.0W	2.1N 62.9W	70	H0	35	N	N	19910410	161731	248	350	84	79
16	30	BRAZIL	AMAZON, TAPAJOS RIVERS	2.0S 55.0W	3.5S 53.3W	60	L0	35	N	N	19910410	162035	248	315	74	79
16	31	BRAZIL	AMAZON RIVER	2.0S 53.0W	3.7S 53.1W	75	L0	35	N	N	19910410	162039	248	315	74	79
16	32	BRAZIL	AMAZON RIVER DELTA	0.0S 49.0W	4.5S 51.8W	70	L0	35	N	N	19910410	162105	248	313	72	79
16	33	BRAZIL	NEAR SAN MARCOS BAY	3.0S 43.0W	8.8S 44.1W	65	L0	35	N	N	19910410	162330	247	307	63	79
16	34	BRAZIL	NEAR SAO FRANCISCO BASIN		9.7S 42.4W	85	L0	35	N	N	19910410	162402	247	306	61	79
16	35	BRAZIL	NEAR SAO FRANCISCO BASIN		10.2S 41.6W	85	L0	35	N	N	19910410	162417	247	306	60	79
16	36	BRAZIL	SAO FRANCISCO RESERVOIR	10.0S 42.0W	10.8S 40.5W	60	L0	35	N	N	19910410	162438	247	305	59	79
16	37	BRAZIL	SAO FRANCISCO RESERVOIR	10.0S 42.0W	10.9S 40.2W	65	L0	35	N	N	19910410	162443	247	305	58	79
38	1	EGYPT	SINAI PEN., JET STREAM	29.0N 31.0E		25	H0	35	N	N						
38	2	EGYPT	GREAT SAND SEA	27.0N 29.0E	28.6N 26.8E	10	L0	35	N	N	19910411	042325	243	84	6	87
38	3	EGYPT	GULF OF SUEZ, MILE RIVER	29.0N 33.0E	28.5N 29.5E	20	L0	35	N	N	19910411	042404	243	85	8	87

TABLE 4.3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	CENTER LON	MADIR LAT	MADIR LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL	OR
38	4	EGYPT	AL-FAYYUM AG. AREA	28.0N	31.0E	28.5N	30.6E	5	LO	35	N	N	19910411	042421	243	86	9	87
38	5	EGYPT	SUEZ CANAL	30.0N	32.0E	28.5N	30.9E	25	LO	35	N	N	19910411	042424	243	86	10	87
38	6	SAUDI ARABIA	NAFUD DESERT, SMOKE PL.	30.0N	43.0E	28.3N	34.6E	20	HO	35	N	N	19910411	042518	244	88	13	87
38	7	IRAQ	BAGHDAD REGION	33.0N	43.0E	27.6N	40.9E	40	HO	35	N	N	19910411	042651	244	91	19	87
38	8	IRAQ	BASRA REG., KUWAIT FIRES	31.0N	47.0E	27.6N	41.5E	10	HO	35	N	N	19910411	042700	244	91	20	87
38	9	PERSIAN GULF	KUWAIT OIL WELL FIRES	29.0N	49.0E	27.4N	42.4E	20	LO	35	N	N	19910411	042714	244	91	20	87
38	10	PERSIAN GULF	KUWAIT OIL WELL FIRES	28.0N	49.0E	27.3N	43.6E	15	HO	35	N	N	19910411	042732	244	92	22	87
38	11	PERSIAN GULF	KUWAIT OIL WELL FIRES	28.0N	49.0E	27.2N	44.0E	10	LO	35	N	N	19910411	042738	244	92	22	87
38	12	PERSIAN GULF	KUWAIT OIL WELL FIRES	29.0N	49.0E	26.9N	45.8E	10	LO	35	N	N	19910411	042804	244	93	24	87
38	13	PERSIAN GULF	KUWAIT OIL WELL FIRES	29.0N	50.0E	26.7N	47.1E	10	LO	35	N	N	19910411	042825	245	93	25	87
38	14	PERSIAN GULF	KUWAIT OIL WELL FIRES	29.0N	49.0E	26.6N	47.5E	5	LO	35	N	N	19910411	042831	245	94	25	87
38	15	PERSIAN GULF	KUWAIT OIL WELL FIRES	30.0N	49.0E	26.6N	47.7E	10	LO	35	N	N	19910411	042833	245	94	25	87
38	16	PERSIAN GULF	KUWAIT OIL WELL FIRES	30.0N	50.0E	26.5N	47.9E	5	LO	35	N	N	19910411	042836	245	94	26	87
38	17	PERSIAN GULF	KUWAIT OIL WELL FIRES	30.0N	49.0E	26.1N	49.9E	5	LO	35	N	N	19910411	042907	245	94	28	87
38	19	PERSIAN GULF	KUWAIT OIL WELL FIRES	30.0N	49.0E	25.9N	51.0E	5	LO	35	N	N	19910411	042924	245	95	29	87
38	20	PERSIAN GULF	KUWAIT OIL WELL FIRES	30.0N	50.0E	25.8N	51.5E	5	LO	35	N	N	19910411	042932	245	95	29	87
38	21	SAUDI ARABIA	AB-JABAYL, DHAHRAN	26.0N	50.0E	25.7N	51.9E	5	LO	35	N	N	19910411	042938	245	95	30	87
38	22	IRAN	ZAGROS MTS., BAKHTEGAN L	30.0N	54.0E	25.6N	52.3E	5	LO	35	N	N	19910411	042944	245	95	30	87
38	23	IRAN	ZAGROS MTS.	28.0N	54.0E	25.5N	53.0E	30	LO	35	N	N	19910411	042954	245	96	31	87
38	24	GULF OF OMAN	SHIP WAKES	24.0N	60.0E	25.3N	53.8E	60	LO	35	N	N	19910411	043006	245	96	31	87
38	25	OMAN	EMPTY QUARTER, SAND DUNES	23.0N	56.0E	24.7N	56.1E	5	LO	35	N	N	19910411	043042	245	97	34	87
38	26	OMAN	WAHIBA SANDS, ALLUV. FAN	22.0N	57.0E	24.5N	56.8E	0	LO	35	N	N	19910411	043053	245	97	34	87
38	27	OMAN	OMAN MTS., WAHIBA SANDS	22.0N	58.0E	24.4N	57.2E	10	LO	35	N	N	19910411	043100	245	97	35	87
38	28	IRAN	S. ZAGROS MTHS.	26.0N	58.0E	24.3N	57.7E	35	LO	35	N	N	19910411	043107	245	97	35	87
38	29	GULF OF OMAN	STRAIT OF HORMUZ	25.0N	57.0E	23.8N	59.4E	55	LO	35	N	N	19910411	043135	246	98	37	87
38	33	EGYPT	NILE RIVER VALLEY	28.0N	31.0E	25.5N	29.0E	15	HO	35	N	N	19910411	060322	245	95	30	88
38	34	EGYPT	NILE R., ARABIAN DESERT	27.0N	32.0E	25.3N	29.6E	20	LO	35	N	N	19910411	060331	245	96	31	88
38	35	EGYPT	NILE RIVER, SINAI PEN.	28.0N	33.0E	25.1N	30.6E	20	HO	35	N	N	19910411	060346	245	96	32	88
38	36	EGYPT	NILE R., VALLEY OF KINGS	25.0N	33.0E	24.9N	31.4E	25	LO	35	N	N	19910411	060359	245	96	32	88
38	37	RED SEA	ARABIAN D., SINAI PEN.	25.0N	36.0E	24.6N	32.6E	35	LO	35	N	N	19910411	060417	245	97	34	88
38	38	EGYPT	NILE RIVER VALLEY	26.0N	32.0E	23.2N	37.4E	0	LO	35	N	N	19910411	060534	246	98	39	88
39	5	PACIFIC OCEAN	DYING THUNDERSTORM			9.0S	115.4W	35	LO	35	N	N	19910410	210404	248	309	64	82
39	6	PACIFIC OCEAN	OCEAN FEATURES			13.6S	106.7W	10	LO	35	N	N	19910410	210643	248	304	54	82
39	7	PACIFIC OCEAN	CLOUD FORMATIONS			17.5S	98.3W	100	LO	35	N	N	19910410	210912	248	300	44	82
39	8	PACIFIC OCEAN	CLOUD FORMATIONS			19.3S	94.0W	55	LO	35	N	N	19910410	211026	247	299	39	82
39	9	PACIFIC OCEAN	CLOUD FORMATIONS			22.5S	85.2W	90	LO	35	N	N	19910410	211253	247	294	30	82
39	10	PACIFIC OCEAN	VORTICES OVER HUMBOLDT C			25.3S	75.2W	80	LO	35	N	N	19910410	211531	246	290	20	82
39	11	CHILE	ATACAMA DESERT	25.0S	70.0W	25.7S	73.3W	15	LO	35	N	N	19910410	211601	246	289	18	82
39	12	CHILE	ATACAMA DESERT	25.0S	69.0W	25.8S	73.1W	5	LO	35	N	N	19910410	211604	246	289	18	82
39	13	CHILE	ATACAMA DESERT	24.0S	69.0W	25.8S	72.9W	5	LO	35	N	N	19910410	211607	246	288	18	82

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	LONG	MADIR LAT	LONG	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
39	14	CHILE	ATACAMA DESERT	23.0S	70.0W	26.0S	72.2W	20	L0	35	N	N	19910410	211618	246	288	17	82
39	15	CHILE	VIEW SOUTH OF ANDES MTS.	29.0S	69.0W	26.1S	71.7W	35	L0	35	N	N	19910410	211625	246	288	17	82
39	16	CHILE	VIEW SOUTH OF ANDES MTS.	27.0S	69.0W	26.2S	71.2W	45	L0	35	N	N	19910410	211633	246	288	16	82
39	17	CHILE	ATACAMA DESERT, ANDES	25.0S	68.0W	26.2S	71.0W	25	L0	35	N	N	19910410	211636	246	288	16	82
39	18	CHILE	ANDES MTS., SOCOMPA VOL.	25.0S	68.0W	26.3S	70.8W	5	L0	35	N	N	19910410	211639	246	287	16	82
39	19	CHILE	ANDES MTS., SOCOMPA VOL.	26.0S	68.0W	26.3S	70.7W	5	L0	35	N	N	19910410	211641	246	287	16	82
39	20	CHILE	ANDES MTS., ATACAMA DES.	26.0S	69.0W	26.3S	70.4W	5	L0	35	N	N	19910410	211645	246	287	15	82
39	21	CHILE	ANDES MTS., ATACAMA DES.	26.0S	69.0W	26.4S	70.3W	5	L0	35	N	N	19910410	211647	246	287	15	82
39	22	CHILE	ANDES MTS., ATACAMA DES.	24.0S	70.0W	26.4S	70.0W	5	L0	35	N	N	19910410	211651	246	287	15	82
39	23	ARGENTINA	ANDES, ARIZARO SALAR	25.0S	68.0W	26.5S	69.5W	5	L0	35	N	N	19910410	211658	246	287	15	82
39	24	ARGENTINA	ANDES, ANTOFALLA SALAR	26.0S	68.0W	26.5S	69.5W	10	L0	35	N	N	19910410	211659	246	287	14	82
39	25	ARGENTINA	ANDES, ANTOFALLA SALAR	27.0S	68.0W	26.5S	69.4W	15	L0	35	N	N	19910410	211700	246	287	14	82
39	26	ARGENTINA	ANDES, HOMBRE MUERTO SAL	26.0S	67.0W	26.5S	69.3W	25	L0	35	N	N	19910410	211702	246	287	14	82
39	27	ARGENTINA	ANDES, ARIZARO SALAR	26.0S	67.0W	26.7S	68.4W	20	L0	35	N	N	19910410	211715	246	286	13	82
39	28	ARGENTINA	ANDES MTS.	27.0S	67.0W	26.8S	67.6W	50	L0	35	N	N	19910410	211727	246	286	13	82
39	29	ARGENTINA	ANDES MTS.	26.0S	67.0W	26.9S	67.5W	45	L0	35	N	N	19910410	211729	246	286	13	82
39	30	ARGENTINA	ANDES MTS.	27.0S	68.0W	26.9S	67.0W	35	L0	35	N	N	19910410	211736	246	286	12	82
39	31	ARGENTINA	ANDES MTS.	26.0S	68.0W	27.0S	67.0W	55	L0	35	N	N	19910410	211737	246	286	12	82
39	32	ARGENTINA	ANDES MTS.	26.0S	67.0W	27.0S	66.9W	50	L0	35	N	N	19910410	211738	246	285	12	82
39	33	ARGENTINA	VIEW WEST OF ANDES MTS.	25.0S	68.0W	27.4S	64.4W	50	H0	35	N	N	19910410	211816	246	284	10	82
39	34	ARGENTINA	VIEW WEST OF ANDES MTS.	27.0S	68.0W	27.6S	62.5W	55	H0	35	N	N	19910410	211843	245	283	8	82
39	35	ARGENTINA	VIEW WEST OF ANDES MTS.	25.0S	67.0W	27.8S	61.3W	65	H0	35	N	N	19910410	211901	245	283	7	82
39	36	ARGENTINA	CLOUDS, SUNSET			28.6S	50.3W	75	H0	35	N	N	19910410	212142	245	277	-4	82
39	37	ARGENTINA	CLOUDS, SUNSET			28.6S	47.2W	75	H0	35	N	N	19910410	212228	244	276	-7	82
40	7	CHINA	VIEW E. TOWARD TERMINAT.			28.5N	115.0E	85	H0	35	N	N	19910410	220743	243	81	1	83
40	8	CHINA	CLOUDS OVER E. CHINA SEA			28.6N	118.3E	85	L0	35	N	N	19910410	220831	243	83	4	83
40	9	PACIFIC OCEAN	CLOUDS, OCEAN FEATURES			27.4N	138.1E	40	L0	35	N	N	19910410	221320	244	92	22	83
40	10	PACIFIC OCEAN	SUNGLINT, EDDIES			26.6N	142.9E	35	L0	35	N	N	19910410	221432	244	94	27	83
40	11	PACIFIC OCEAN	SUNGLINT, EDDIES			26.3N	144.4E	30	L0	35	N	N	19910410	221456	245	95	28	83
40	12	PACIFIC OCEAN	SUNGLINT, EDDIES			25.6N	147.8E	30	L0	35	N	N	19910410	221548	245	96	32	83
40	13	PACIFIC OCEAN	THUNDERSTORM			8.7N	169.9W	75	L0	35	N	N	19910410	222749	248	92	77	83
40	14	PACIFIC OCEAN	CHRISTMAS ISLAND, WAKES	2.0N	157.0W	3.8N	161.4W	25	L0	35	N	N	19910410	223030	248	44	84	83
40	15	PACIFIC OCEAN	MARQUESAS ISLANDS	9.0S	140.0W	7.1S	142.7W	35	L0	35	N	N	19910410	223628	248	313	68	83
40	16	PACIFIC OCEAN	VIEW W. TOWARD SUNSET			28.6S	71.9W	70	H0	35	N	N	19910410	225545	245	276	-5	83
40	17	PACIFIC OCEAN	SUNSET TERMINATOR			27.6S	55.3W	H0	35	N	N	N	19910410	225947	243	268	-21	83
40	18	PACIFIC OCEAN	SUNSET TERMINATOR			27.6S	55.3W	H0	35	N	N	N	19910410	225948	243	268	-21	83
40	19	PACIFIC OCEAN	SUNSET TERMINATOR			27.6S	55.3W	H0	35	N	N	N	19910410	225948	243	268	-21	83
40	20	PACIFIC OCEAN	SUNSET TERMINATOR			27.6S	55.2W	H0	35	N	N	N	19910410	225949	243	268	-21	83
40	21	PACIFIC OCEAN	SUNSET TERMINATOR			27.6S	55.1W	H0	35	N	N	N	19910410	225951	243	268	-21	83
40	22	PACIFIC OCEAN	SUNSET TERMINATOR			27.6S	55.0W	H0	35	N	N	N	19910410	225952	243	268	-21	83

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
40	23		SUNSET TERMINATOR		27.6S 55.0W	HO	35	N	19910410	225952	243	268	-21	83		
40	24		SUNSET TERMINATOR		27.6S 54.9W	HO	35	N	19910410	225953	243	268	-21	83		
40	25		SUNSET TERMINATOR		27.6S 54.9W	HO	35	N	19910410	225953	243	268	-21	83		
40	26		SUNSET TERMINATOR		27.5S 54.7W	HO	35	N	19910410	225957	243	268	-21	83		
40	27		SUNSET TERMINATOR		27.5S 54.6W	HO	35	N	19910410	225958	243	268	-21	83		
40	28		SUNSET TERMINATOR		27.5S 54.6W	HO	35	N	19910410	225958	243	268	-21	83		
40	29		SUNSET TERMINATOR		27.5S 54.4W	HO	35	N	19910410	230001	243	268	-22	83		
40	30		SUNSET TERMINATOR		27.5S 54.3W	HO	35	N	19910410	230002	243	268	-22	83		
40	31		SUNSET TERMINATOR		27.5S 54.3W	HO	35	N	19910410	230002	243	268	-22	83		
40	32		SUNSET TERMINATOR		27.4S 54.0W	HO	35	N	19910410	230007	243	268	-22	83		
40	33		SUNSET TERMINATOR		26.8S 50.2W	HO	35	N	19910410	230104	243	266	-26	83		
41	1	OMAN	CITY OF SALALAH	17.0N 54.0E	18.1N 51.6E	5	LO	35	N	19910411	060929	247	101	53	88	
41	2	OMAN	SALALAH, EMPTY QUARTER	18.0N 52.0E	17.3N 53.4E	10	LO	35	N	19910411	061000	247	101	55	88	
41	3	OMAN	OMAN MTS., WAHIBA SANDS	22.0N 57.0E	15.8N 56.8E	15	HO	35	N	19910411	061100	247	100	59	88	
41	4	OMAN	OMAN MTS., WAHIBA SANDS	22.0N 60.0E	15.4N 57.6E	20	HO	35	N	19910411	061115	247	100	60	88	
41	5	SAUDI ARABIA	EMPTY QUARTER	23.0N 54.0E	14.8N 58.8E	15	HO	35	N	19910411	061136	247	100	61	88	
41	6	SAUDI ARABIA	EMPTY QUARTER	19.0N 51.0E	14.7N 59.0E	5	HO	35	N	19910411	061140	247	100	61	88	
41	7	OMAN	EMPTY QUARTER, MASIRAH I	23.0N 56.0E	14.5N 59.4E	15	HO	35	N	19910411	061146	247	100	62	88	
41	8	OMAN	EMPTY QUARTER, MASIRAH I	14.2N 60.0E	14.2N 60.0E	20	HO	35	O	19910411	061157	247	100	63	88	
41	9	ARABIAN SEA	OIL SLICKS	13.1N 62.4E	13.1N 62.4E	15	LO	35	N	19910411	061240	247	99	65	88	
41	10	ARABIAN SEA	OIL SLICKS	12.8N 63.0E	12.8N 63.0E	10	LO	35	N	19910411	061251	247	98	66	88	
41	11	MALDIVES	MALCOLM ATOLL	7.0N 73.0E	7.9N 72.1E	5	LO	35	N	19910411	061540	248	88	76	88	
41	12	MALDIVES	THAVANDIFFULU ATOLL	7.0N 73.0E	7.0N 73.6E	10	LO	35	N	19910411	061608	248	84	77	88	
41	13	MALDIVES	MALE, ARI, FELIDU ATOLLS	4.0N 73.0E	6.7N 74.1E	25	LO	35	N	19910411	061618	248	82	78	88	
41	14	MALDIVES	MALE, ARI, FELIDU ATOLLS	3.0N 74.0E	5.4N 76.5E	25	LO	35	N	19910411	061703	248	73	80	88	
41	15	SRI LANKA	VIEW OF WHOLE ISLAND	7.0N 81.0E	3.2N 80.2E	25	LO	35	N	19910411	061814	248	48	83	88	
41	16	SRI LANKA	VIEW OF WHOLE ISLAND	8.0N 81.0E	3.1N 80.5E	30	LO	35	N	19910411	061819	248	46	83	88	
41	17	INDONESIA	EASTERN END OF JAVA	10.0S 115.0E	15.8S 114.6E	55	LO	35	N	19910411	062900	248	305	51	88	
41	18	INDONESIA	EASTERN END OF JAVA	10.0S 116.0E	16.4S 115.9E	60	HO	35	N	19910411	062923	248	304	49	88	
41	19	AUSTRALIA-WA	EIGHTY MILE BEACH	19.0S 122.0E	17.7S 119.0E	40	LO	35	N	19910411	063016	248	303	46	88	
41	20	AUSTRALIA-WA	EIGHTY MILE BEACH	20.0S 121.0E	17.8S 119.2E	30	LO	35	N	19910411	063019	248	303	46	88	
41	21	AUSTRALIA-WA	EIGHTY MILE BEACH	20.0S 121.0E	17.9S 119.3E	35	LO	35	N	19910411	063022	248	303	46	88	
41	22	AUSTRALIA-WA	CAPE KERAUDREN	20.0S 120.0E	18.0S 119.7E	30	LO	35	N	19910411	063028	248	302	45	88	
41	23	AUSTRALIA-WA	GREAT SANDY DESERT	20.0S 122.0E	18.4S 120.4E	45	LO	35	N	19910411	063041	248	302	44	88	
41	24	AUSTRALIA-WA	COAST, KIMBERLY PLAT.	17.0S 123.0E	18.5S 120.7E	75	LO	35	N	19910411	063046	248	302	44	88	
41	25	AUSTRALIA-WA	FORESTIER IS. AREA	21.0S 118.0E	18.7S 121.4E	30	LO	35	N	19910411	063057	248	302	43	88	
41	26	AUSTRALIA-WA	GREAT SANDY DESERT	19.0S 121.9E	19.0S 121.9E	65	LO	35	N	19910411	063107	248	301	43	88	
41	27	AUSTRALIA-WA	GREAT SANDY DESERT	21.0S 123.0E	19.2S 122.4E	65	LO	35	N	19910411	063115	248	301	42	88	
41	28	AUSTRALIA-WA	GREAT SANDY/GIBSON DES.	19.4S 122.9E	19.4S 122.9E	65	HO	35	N	19910411	063124	248	301	42	88	
41	29	AUSTRALIA-WA	GREAT SANDY/GIBSON DES.	21.0S 124.0E	19.6S 123.4E	70	LO	35	N	19910411	063132	248	301	41	88	

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	NADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
41	30	AUSTRALIA-WA	GREAT SANDY/GIBSON DES.	19.8S 124.0E	19.8S 124.0E	60	L0	35	N	N	19910411	063142	248	300	40	88
41	31	AUSTRALIA-WA	GREAT SANDY/GIBSON DES.	20.0S 124.5E	20.0S 124.5E	75	L0	35	N	N	19910411	063151	247	300	40	88
41	32	AUSTRALIA-WA	GREAT SANDY/GIBSON DES.	20.2S 124.9E	20.2S 124.9E	80	L0	35	N	N	19910411	063157	247	300	40	88
41	33	AUSTRALIA-WA	LAKE DORA, GIBSON DESERT	22.0S 123.0E	20.4S 125.5E	45	L0	35	N	N	19910411	063207	247	299	39	88
41	34	AUSTRALIA-WA	L. BLANCHE, GIBSON DESERT	23.0S 123.0E	20.5S 125.7E	35	L0	35	N	N	19910411	063211	247	299	39	88
41	35	AUSTRALIA-WA	LAKE DORA, GIBSON DESERT	22.0S 123.0E	21.2S 127.7E	40	L0	35	N	N	19910411	063243	247	298	37	88
41	36	AUSTRALIA-WA	PERCIVAL LAKES	21.0S 126.0E	21.7S 129.2E	20	L0	35	N	N	19910411	063309	247	298	35	88
41	37	AUSTRALIA-WA	GIBSON DESERT	23.0S 124.0E	22.1S 130.4E	35	L0	35	N	N	19910411	063328	247	297	34	88
42	1	MOROCCO	W. LOOKING VIEW ATLAS M.	30.0N 8.0W	28.4N 15.8W	15	H0	35	N	N	19910411	073138	243	86	10	89
42	2	MOROCCO	ANTI-ATLAS MTNS.	30.0N 7.0W	28.2N 12.8W	15	L0	35	N	N	19910411	073221	244	87	13	89
42	3	MOROCCO	ANTI-ATLAS MTNS.	31.0N 6.0W	28.2N 12.3W	10	L0	35	N	N	19910411	073229	244	88	13	89
42	4	MOROCCO	HIGH ATLAS MTNS.	31.0N 7.0W	28.0N 9.7W	5	L0	35	N	N	19910411	073307	244	89	15	89
42	5	MOROCCO	HIGH ATLAS MTNS.	32.0N 6.0W	27.9N 8.8W	15	L0	35	N	N	19910411	073320	244	89	16	89
42	6	MOROCCO	HIGH ATLAS MTNS.	31.0N 8.0W	27.8N 8.4W	0	L0	35	N	N	19910411	073326	244	89	17	89
42	7	MOROCCO	ANTI-ATLAS MTNS.	31.0N 7.0W	27.8N 7.9W	5	L0	35	N	N	19910411	073334	244	90	17	89
42	8	MOROCCO	TELL ATLAS MTNS.	35.0N 5.0W	27.7N 7.3W	35	H0	35	N	N	19910411	073342	244	90	18	89
42	9	ALGERIA	GRAND ERG WEST		27.5N 6.2W	0	L0	35	N	N	19910411	073359	244	90	19	89
42	10	ALGERIA	IGUIDI DESERT	29.0N 3.0W	27.5N 5.7W	0	L0	35	N	N	19910411	073406	244	91	19	89
42	11	ALGERIA	SAHARAN ATLAS MTNS.	32.0N 1.0W	27.2N 4.0W	15	H0	35	N	N	19910411	073432	244	91	21	89
42	12	ALGERIA	WESTERN GRAND ERG	31.0N 3.0E	25.8N 3.6E	15	H0	35	N	N	19910411	073627	245	95	28	89
42	13	ALGERIA	EASTERN GRAND ERG	30.0N 4.0E	25.8N 3.9E	5	L0	35	N	N	19910411	073631	245	95	28	89
42	14	ALGERIA	EASTERN GRAND ERG	29.0N 5.0E	25.7N 4.3E	0	L0	35	N	N	19910411	073637	245	95	29	89
42	15	ALGERIA	TADEMAIT PLATEAU	28.0N 6.0E	25.5N 5.0E	0	L0	35	N	N	19910411	073648	245	95	30	89
42	16	ALGERIA	IRARRAREN DUNES	28.0N 7.0E	25.5N 5.2E	5	L0	35	N	N	19910411	073652	245	95	30	89
42	17	ALGERIA	IRARRAREN DUNES, E. ERG	29.0N 7.0E	25.4N 5.6E	5	L0	35	N	N	19910411	073658	245	95	30	89
42	18	ALGERIA	IRAGGAR MTNS.	23.0N 11.0E	24.5N 9.1E	5	L0	35	N	N	19910411	073752	245	97	34	89
42	19	NIGER	TCHIGAI PLATEAU	22.0N 12.0E	24.4N 9.4E	0	L0	35	N	N	19910411	073757	245	97	34	89
42	20	NIGER	TCHIGAI PLATEAU	23.0N 13.0E	24.4N 9.6E	0	L0	35	N	N	19910411	073800	245	97	34	89
42	21	NIGER	TCHIGAI PLATEAU	22.0N 14.0E	24.3N 9.8E	0	L0	35	N	N	19910411	073803	245	97	34	89
42	22	ALGERIA	MARZUQ DESERT	24.0N 13.0E	24.2N 10.1E	0	L0	35	N	N	19910411	073807	245	97	35	89
42	23	ALGERIA	MARZUQ DESERT	24.0N 14.0E	24.2N 10.2E	0	L0	35	N	N	19910411	073810	245	97	35	89
42	24	ALGERIA	MARZUQ DESERT	24.0N 15.0E	24.0N 10.9E	0	L0	35	N	N	19910411	073820	245	97	35	89
42	25	NIGER	TCHIGAI PLATEAU	23.0N 13.0E	23.8N 11.6E	0	L0	35	N	N	19910411	073832	245	97	36	89
42	26	CHAD	TIBESTI SANDS	23.0N 15.0E	23.6N 12.2E	0	L0	35	N	N	19910411	073841	245	98	37	89
42	27	LIBYA	AREA N. OF TIBESTI MTNS.	24.0N 16.0E	23.6N 12.4E	0	L0	35	N	N	19910411	073845	246	98	37	89
42	28	LIBYA	TIBESTI MTS., UAUEN NAMUS	24.0N 18.0E	23.3N 13.3E	15	H0	35	N	N	19910411	073858	246	98	38	89
42	29	LIBYA	TIBESTI MTS., UAUEN NAMUS	25.0N 18.0E	23.2N 13.8E	10	H0	35	N	N	19910411	073906	246	98	38	89
42	30	LIBYA	UAU EN NAMUS	26.0N 16.0E	22.8N 15.0E	0	H0	35	N	N	19910411	073926	246	98	40	89
42	31	LIBYA	NE TIBESTI MTS.	24.0N 20.0E	22.5N 15.8E	20	H0	35	N	N	19910411	073939	246	99	40	89
42	32	CHAD	TIBESTI MASSIF	21.0N 18.0E	22.3N 16.5E	10	L0	35	N	N	19910411	073950	246	99	41	89



TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		MADIR		CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN	EL	OR
				LAT	LO	LAT	LO												
42	33	LIBYA	UAU EN NAMUS	25.0N	17.0E	22.2N	16.9E	0	HO	35	N	N	19910411	073957	246	99	41	89	
42	34	LIBYA	AREA NE OF TIBESTI	22.0N	21.0E	22.0N	17.5E	5	LO	35	N	N	19910411	074007	246	99	42	89	
42	35	LIBYA	AREA NE OF TIBESTI	23.0N	21.0E	21.4N	19.0E	10	LO	35	N	N	19910411	074032	246	99	44	89	
42	36	LIBYA	AREA NE OF TIBESTI	22.0N	21.0E	21.1N	19.8E	5	LO	35	N	N	19910411	074046	246	99	45	89	
42	37	CHAD	EASTERN TIBESTI MTS.	21.0N	20.0E	20.9N	20.6E	5	LO	35	N	N	19910411	074057	246	100	45	89	
44	1	BRAZIL	RIO SAO FRANCISCO RESERV	9.0S	38.0W	12.2S	37.8W	60	LO	35	N	Y	19910410	162526	247	304	56	79	
44	2	BRAZIL	RIO SAO FRANCISCO RESERV	9.0S	38.0W	12.2S	37.7W	60	LO	35	N	Y	19910410	162529	247	304	55	79	
44	3	BRAZIL	RIO SAO FRANCISCO RESERV	10.0S	37.0W	12.4S	37.3W	60	LO	35	N	N	19910410	162536	247	304	55	79	
44	4	BRAZIL	RIO ITAPICURU	10.5S	38.0W	12.6S	37.0W	50	LO	35	N	N	19910410	162541	247	304	55	79	
44	5	BRAZIL	RIO ITAPICURU	11.0S	38.5W	12.8S	36.6W	60	LO	35	N	Y	19910410	162548	247	304	54	79	
44	6	BRAZIL	RIO ITAPICURU	11.0S	38.0W	12.9S	36.3W	60	LO	35	N	Y	19910410	162554	247	303	54	79	
44	7	BRAZIL	RIO ITAPICURU, COAST	11.5S	37.5W	13.1S	36.0W	50	LO	35	N	Y	19910410	162559	247	303	53	79	
44	7A	BRAZIL	RIO ITAPICURU, COAST	10.5S	37.0W			40	LO	35	N	Y							
44	8	BRAZIL	BORBOREMA PLAT, EAST CST.	7.0S	37.0W	13.5S	35.3W	60	HO	35	N	N	19910410	162613	247	303	53	79	
44	9	BRAZIL	PANORAMA-RIO FRANC.BASIN	10.0S	42.0W	13.8S	34.7W	75	HO	35	N	N	19910410	162624	247	303	52	79	
44	10	GALAPAGOS ISLANDS	PANORAMA	0.5S	89.0W	2.4N	87.3W	15	LO	35	N	N	19910410	175050	248	359	84	80	
44	11		CARGO BAY			1.0N	85.0W			70	N	N	19910410	175134	248	340	83	80	
44	12	PERU	COAST	5.0S	80.0W	1.7S	80.4W	50	HO	70	N	N	19910410	175302	248	322	78	80	
44	13	ECUADOR	RIO NAPO, RIO COCA, ANDES	1.0S	77.0W	2.3S	79.4W	75	LO	70	N	N	19910410	175322	248	320	77	80	
44	14	PERU	RIO NAPO, CLOUDS	1.0S	75.0W	2.7S	78.6W	75	LO	70	N	N	19910410	175337	248	319	76	80	
44	15	PERU	AMAZON BASIN, CLOUDS			3.4S	77.6W	80	HO	70	N	N	19910410	175357	248	317	75	80	
44	16	PERU	RIO AMAZON, CLOUDS	4.0S	72.0W	5.3S	74.2W	75	LO	70	N	Y	19910410	175502	248	313	71	80	
44	17	PERU	RIO AMAZON, CLOUDS	4.0S	72.0W	5.5S	73.9W	75	LO	70	N	Y	19910410	175507	248	313	70	80	
44	18	BRAZIL	AMAZON BASIN, CLOUDS			6.6S	72.0W	80	HO	35	N	N	19910410	175543	248	311	68	80	
44	19	BRAZIL	AMAZON BASIN, CLOUDS			8.7S	68.2W	80	LO	35	N	N	19910410	175655	248	308	64	80	
44	20	BRAZIL	RIO TIETE, CLOUDS	21.0S	50.5W	18.5S	48.2W	80	LO	35	N	Y	19910410	180255	247	299	41	80	
44	21	BRAZIL	RIO PARANA, JUPIA RESERV.	20.5S	50.5W	18.6S	48.0W	80	LO	35	N	Y	19910410	180258	247	299	41	80	
44	22	BRAZIL	RIO PARANAIBA/RESERVOIR	19.0S	49.0W	18.7S	47.7W	75	LO	35	N	N	19910410	180303	247	298	40	80	
44	23	BRAZIL	RIO PARANAIBA/RESERVOIR	18.5S	47.5W	18.8S	47.5W	60	LO	35	N	Y	19910410	180307	247	298	40	80	
44	24	BRAZIL	HILLS, CLOUDS	18.0S	47.0W	18.9S	47.2W	60	LO	35	N	Y	19910410	180312	247	298	40	80	
44	25	BRAZIL	RIO PARANAIBA, CLOUDS	18.0S	50.0W	19.1S	46.8W	70	LO	35	N	N	19910410	180319	247	298	39	80	
44	26	BRAZIL	TRES MARIAS RESERVOIR	19.0S	45.0W	19.3S	46.3W	40	LO	35	N	N	19910410	180327	246	298	39	80	
44	27	BRAZIL	DE PEIXOTO RESERVOIR	20.5S	47.0W	19.4S	46.0W	75	LO	35	N	N	19910410	180331	246	298	38	80	
44	28	BRAZIL	TRES MARIAS RESERVOIR	18.0S	44.5W	19.8S	45.0W	50	LO	35	N	Y	19910410	180349	246	297	37	80	
44	29	BRAZIL	TRES MARIAS RESERVOIR	18.5S	45.0W	19.9S	44.6W	40	LO	35	N	Y	19910410	180355	246	297	37	80	
44	30	BRAZIL	RIO DOCE, CLOUDS	19.5S	42.5W	20.5S	43.2W	60	LO	35	N	N	19910410	180419	246	296	35	80	
44	31	BRAZIL	CABO SAO TOME, CABO FRIO	22.0S	42.0W	20.7S	42.6W	50	LO	35	N	Y	19910410	180429	246	296	35	80	
44	32	BRAZIL	CABO SAO TOME, COAST	20.5S	41.5W	20.8S	42.4W	50	LO	35	N	Y	19910410	180433	246	296	34	80	
44	33	BRAZIL	RIO DOCE-MOUTH, COAST	19.5S	41.0W	21.0S	41.9W	60	LO	35	N	N	19910410	180441	246	296	34	80	
44	36	BRAZIL	CABO SAO TOME, CAMPOS	21.5S	41.5W	21.0S	41.6W	30	LO	35	N	N	19910410	180445	246	296	34	80	

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	LONG	MADIR LAT	LONG	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
44	37	BRAZIL	TRES MARIAS RESERVOIR	19.0S	45.0W	21.2S	41.2W	60	L0	35	N	N	19910410	180452	246	295	33	80
44	38	BRAZIL	CABO FRIO, COAST, CLOUDS	22.5S	42.5W	21.3S	40.8W	50	L0	35	N	N	19910410	180459	246	295	33	80
45	1		CARGO BAY			11.6S	80.5E			35	O	N	19910410	083744	247	302	55	74
45	2		CARGO BAY			11.9S	81.2E			35	O	N	19910410	083756	247	302	54	74
45	3		CARGO BAY			12.2S	81.7E			35	O	N	19910410	083806	247	302	53	74
45	4	AUSTRALIA-WA	EXMOUTH PENINSULA/BAY	23.0S	115.0E	24.4S	112.2E	30	H0	35	N	Y	19910410	084644	245	289	20	74
45	5	AUSTRALIA-WA	EXMOUTH PENINSULA/BAY	24.0S	115.0E	24.4S	112.4E	30	L0	35	N	Y	19910410	084647	245	289	20	74
45	6	AUSTRALIA-WA	NW COAST	25.0S	115.0E	24.5S	112.8E	30	L0	35	N	Y	19910410	084654	245	289	20	74
45	7	AUSTRALIA-WA	NW COAST	25.0S	114.0E	24.7S	113.7E	40	L0	35	N	Y	19910410	084707	245	288	19	74
45	8	AUSTRALIA-WA	EXMOUTH PENINSULA/BAY	23.0S	115.0E	25.0S	114.7E	30	L0	35	N	Y	19910410	084723	245	288	18	74
45	28	MAURITANIA	RICHAT STRUCTURE	22.0N	10.0W	22.6N	10.2W	0	L0	35	N	N	19910410	095051	246	103	46	75
45	29	ALGERIA	ERG CHECH, EGLAB MASSIF	24.0N	3.0W	22.1N	8.6W	0	L0	35	N	N	19910410	095117	246	103	48	75
45	30	MALI	L. FAGUIBINE, IRGUJ AZOUAD	19.0N	2.0W	20.1N	2.9W	0	L0	35	N	N	19910410	095251	247	105	54	75
45	31	NIGER	TALAK DESERT, TENERE DES.	20.0N	7.0E	18.3N	1.5E	5	H0	35	N	N	19910410	095406	247	105	59	75
45	32	NIGER	AIR MTNS, MARZUQ SAND SEA	19.0N	10.0E	17.1N	4.3E	20	H0	35	N	N	19910410	095455	247	106	62	75
45	33	CHAD	L. CHAD, CHARI R, CONGO BAS	9.0N	18.0E	15.2N	8.6E	70	H0	35	O	N	19910410	095610	247	105	67	75
45	34	CHAD	BODELE DES., L. CHAD, TIBEST	17.0N	17.0E	14.3N	10.4E	30	H0	35	N	N	19910410	095643	247	105	69	75
45	35	CHAD	L. CHAD, CHARI R, CONGO BAS	9.0N	19.0E	13.9N	11.1E	30	H0	35	N	N	19910410	095655	247	105	69	75
45	36	CHAD	BODELE DES., CHARI R, BASIN	14.0N	17.0E	13.8N	11.3E	40	H0	35	N	N	19910410	095659	247	105	70	75
45	37	CHAD	BODELE DES., TIBESTI MTNS	18.0N	17.0E	13.6N	11.8E	30	H0	35	N	N	19910410	095708	247	105	70	75
45	38	CHAD	LAKE CHAD	13.0N	15.0E	13.4N	12.1E	30	H0	35	N	N	19910410	095713	247	105	71	75
46	1	TANZANIA	ZANZIBAR I., PEMBA I., CST	7.0S	39.0E	2.5S	42.2E	60	H0	35	N	N	19910411	092819	248	340	79	90
46	2	MOZAMBIQUE CHANNEL	SULUY, CURRENT BOUND, SGLT			4.0S	44.8E	40	L0	35	N	N	19910411	092909	249	331	76	90
46	3	MOZAMBIQUE CHANNEL	SULUY, CURRENT BOUND, SGLT			4.1S	45.0E	30	L0	35	N	Y	19910411	092912	249	331	76	90
46	4	MOZAMBIQUE CHANNEL	SULUY, CURRENT BOUND, SGLT			4.3S	45.2E	30	L0	35	N	Y	19910411	092917	249	330	76	90
46	5	MOZAMBIQUE CHANNEL	SULUY, CURRENT BOUND, SGLT			4.4S	45.4E	40	L0	35	N	Y	19910411	092921	249	329	75	90
46	6	MOZAMBIQUE CHANNEL	SULUY, CURRENT BOUND, SGLT			4.6S	45.7E	30	L0	35	N	Y	19910411	092927	249	329	75	90
46	7	MOZAMBIQUE CHANNEL	SULUY, CURRENT BOUND, SGLT			4.7S	46.0E	40	L0	35	N	Y	19910411	092932	249	328	75	90
46	8	MOZAMBIQUE CHANNEL	SULUY, CURRENT BOUND, SGLT			4.9S	46.2E	30	L0	35	N	Y	19910411	092936	249	327	75	90
46	9	MOZAMBIQUE CHANNEL	SULUY, CURRENT BOUND, SGLT			5.0S	46.4E	30	L0	35	N	Y	19910411	092940	249	327	74	90
56	1	SUDAN	KHARTOUM, NILE RIVER	16.0N	33.0E	16.2N	32.0E	5	L0	35	N	N	19910411	074412	247	100	57	89
56	2	SUDAN	SUDAN AGRICULTURE REGION	14.0N	32.0E	16.1N	32.2E	0	L0	35	N	N	19910411	074416	247	100	58	89
56	3	SUDAN	SUDAN AGRICULTURE REGION	15.0N	33.0E	16.1N	32.3E	0	L0	35	N	N	19910411	074418	247	100	58	89
56	4	SUDAN	SUDAN AGRICULTURE REGION	14.0N	33.0E	15.9N	32.6E	5	L0	35	N	N	19910411	074424	247	100	58	89
56	5	SUDAN	NILE RIVER VALLEY	19.0N	33.0E	15.7N	33.0E	5	L0	35	N	N	19910411	074431	247	100	59	89
56	6	SUDAN	SUDAN AGRICULTURE REGION	14.0N	34.0E	14.6N	35.4E	0	L0	35	N	N	19910411	074514	247	100	61	89
56	7	ETHIOPIA	BLUE NILE RIVER	10.0N	36.0E	14.4N	35.8E	30	L0	35	N	N	19910411	074521	247	99	62	89
56	8	ETHIOPIA	MT. RASDAJAN	13.0N	38.0E	13.7N	37.2E	10	L0	35	N	N	19910411	074545	247	99	63	89
56	9	SAUDI ARABIA	EMPTY QUARTER	17.0N	46.0E	12.5N	39.5E	15	H0	35	N	N	19910411	074628	247	98	66	89
56	10	RED SEA	VIEW NORTH	19.0N	39.0E	12.3N	40.0E	15	H0	35	N	N	19910411	074637	248	98	66	89

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	CENTER LON	NADIR LAT	NADIR LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL	OR		
56	11	SAUDI ARABIA	DISSECTED PLATEAU	16.0N	47.0E	11.8N	41.0E	5	HO	35	N	N	19910411	074655	248	97	68	89		
56	12	SAUDI ARABIA	EMPTY QUARTER	17.0N	46.0E	11.5N	41.5E	5	LO	35	N	N	19910411	074704	248	97	68	89		
56	13	SAUDI ARABIA	HIAJZ MASSIF	15.0N	45.0E	11.4N	41.7E	20	LO	35	N	N	19910411	074707	248	96	68	89		
56	14	SAUDI ARABIA	HIAJZ MASSIF, ADEN	14.0N	44.0E	10.6N	43.2E	20	LO	35	N	N	19910411	074736	248	95	70	89		
56	15	SOMALIA	HORN OF AFRICA	10.0N	50.0E	8.7N	46.8E	15	LO	35	N	N	19910411	074842	248	90	74	89		
56	24	AUSTRALIA-WA	SHARK BAY	26.0S	114.0E	24.4S	114.0E	25	LO	35	N	N	19910411	080857	247	294	27	89		
56	25	AUSTRALIA-WA	SHARK BAY	25.0S	114.0E	24.5S	114.4E	25	LO	35	N	N	19910411	080903	247	293	26	89		
56	26	AUSTRALIA-WA	KENNEDY RANGE, LYONS R.	24.0S	116.0E	24.8S	115.5E	0	LO	35	N	N	19910411	080920	247	293	25	89		
56	27	AUSTRALIA-WA	LOCKIER RANGE	25.0S	116.0E	25.0S	116.3E	10	LO	35	N	N	19910411	080933	247	292	24	89		
56	28	AUSTRALIA-WA	LOCKIER RANGE	25.0S	116.0E	25.3S	117.5E	5	LO	35	N	N	19910411	080952	247	292	23	89		
56	29	AUSTRALIA-WA	HAMERSLEY RANGES	25.0S	118.0E	25.4S	117.9E	5	LO	35	N	N	19910411	080958	246	292	23	89		
56	30	AUSTRALIA-WA	HAMERSLEY RANGES	26.0S	120.0E	25.5S	118.4E	5	LO	35	N	N	19910411	081006	246	291	22	89		
56	31	AUSTRALIA-WA	HAMERSLEY RANGES	25.0S	119.0E	25.6S	119.0E	55	LO	35	N	N	19910411	081014	246	291	22	89		
56	32	AUSTRALIA-WA	W. GIBSON DESERT	26.0S	120.0E	25.7S	119.5E	40	LO	35	N	N	19910411	081023	246	291	21	89		
56	33	AUSTRALIA-WA	GIBSON DES., L. WAY	27.0S	120.0E	25.9S	120.2E	5	LO	35	N	N	19910411	081033	246	290	20	89		
56	34	AUSTRALIA-WA	GIBSON DES., L. CARNEGIE	26.0S	123.0E	26.2S	122.0E	0	LO	35	N	N	19910411	081100	246	289	19	89		
56	35	AUSTRALIA-WA	GREAT VICTORIA DESERT	28.0S	124.0E	26.8S	124.8E	25	LO	35	N	N	19910411	081143	246	288	16	89		
56	36	AUSTRALIA-WA	GREAT VICTORIA DESERT	30.0S	125.0E	27.3S	128.3E	15	LO	35	N	N	19910411	081235	246	286	13	89		
56	37	AUSTRALIA-WA	MULLARBOR PLAIN	31.0S	129.0E	27.5S	129.3E	45	LO	35	N	N	19910411	081251	246	286	12	89		
71	0 B		EXTERNAL TANK							250	N	N								
71	0 C		EXTERNAL TANK							HO	250	N	Y							
71	0 D		EXTERNAL TANK							HO	250	N	Y							
71	0 E		EXTERNAL TANK							HO	250	N	Y							
71	0 F		EXTERNAL TANK							10	HO	250	N	Y						
71	0 G		EXTERNAL TANK							20	HO	250	N	Y						
71	0 H		EXTERNAL TANK							25	HO	250	N	Y						
71	0 J		EXTERNAL TANK							25	HO	250	N	N						
71	0 K		EXTERNAL TANK							25	HO	250	N	N						
71	0 L		EXTERNAL TANK							30	HO	250	N	N						
71	0 M		EXTERNAL TANK, SPACE DEBR							HO	250	N	N							
71	0 N		EXTERNAL TANK, SOACE DEBR							HO	250	N	N							
71	0 P		MEANDERING RIVER							70	LO	250	N	Y						
71	0 Q		MEANDERING RIVER							65	LO	250	N	Y						
71	1		CARGO BAY-GRO			24.2N	137.4W			250	N	N	19910405	155204	246	88	11	2		
71	2		CARGO BAY-GRO			24.9N	134.7W			250	N	N	19910405	155246	246	89	14	2		
71	3	MEXICO	GUADALUPE ISLAND	29.0N	118.5W	28.0N	116.7W			0	LO	250	N	N	19910405	155717	246	100	30	2
71	4	MEXICO	GUADALUPE I.-DARK FRAME	29.0N	118.5W	28.0N	116.3W			0	LO	250	N	N	19910405	155723	246	100	31	2
71	5	MEXICO	LAGUNA SALADA-SALTON SEA	32.5N	115.5W	28.2N	114.5W			0	LO	250	N	N	19910405	155750	246	101	32	2
71	6		BLACK			28.2N	113.7W						19910405	155802	246	102	33	2		
71	7	BAHAMAS	GREAT BAHAMA BK., EXUMA I	23.5N	76.0W	24.8N	75.4W			20	LO	250	N	Y	19910405	160729	245	141	66	2

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	NADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL	OR
71	8	BAHAMAS	GREAT BAHAMA BK., EXUMA I	23.5N 75.5W	24.8N 75.3W	20	LO	250	N	Y	19910405	180731	245	141	66	2
71	9	BAHAMAS	GREAT BAHAMA BK., EXUMA I	23.5N 75.5W	24.8N 75.2W	20	LO	250	N	Y	19910405	180733	245	142	67	2
71	10	BAHAMAS	EXUMA I.-VERY DARK FRAME	23.5N 75.5W	24.7N 75.0W	20	LO	250	N	Y	19910405	180735	245	142	67	2
71	11	BAHAMAS	EXUMA I.-VERY DARK FRAME	23.5N 75.5W	24.7N 74.9W	20	LO	250	N	Y	19910405	180737	245	142	67	2
71	12	USA-HI	KAUAI-CLOUD COVERED	22.5N 159.5W	24.7N 159.1W	40	LO	250	F	N	19910405	172604	246	89	13	3
71	13	USA-HI	KAUAI, KAUAI	22.0N 160.0W	24.8N 158.6W	40	LO	250	N	Y	19910405	172611	246	89	13	3
71	14	USA-HI	MAUI, LANAI, KAHOOLOAWE	21.0N 156.5W	25.0N 158.0W	40	LO	250	N	Y	19910405	172621	246	89	14	3
71	15	USA-HI	MAUI, LANAI, KAHOOLOAWE	21.0N 156.5W	25.4N 156.5W	35	LO	250	N	Y	19910405	172645	246	90	15	3
71	16	USA-HI	MAUI, LANAI, KAHOOLOAWE	21.0N 156.5W	25.5N 155.7W	35	LO	250	F	N	19910405	172656	246	91	16	3
71	17	USA-HI	HAWAII, MAUI, KAHOOLOAWE	20.0N 156.0W	25.7N 155.0W	35	LO	250	N	Y	19910405	172707	246	91	17	3
71	18	MEXICO	SHUTTLE TAIL-GRO	24.5N 112.0W	27.5N 113.7W	10	LO	250	N	Y	19910405	173535	246	114	48	3
71	19	MEXICO	BAJA-MAGDALENA BAY	23.5N 110.0W	27.4N 112.8W	10	LO	250	N	Y	19910405	173717	246	121	54	3
71	20	MEXICO	BAJA-SOUTHERN TIP	24.5N 110.5W	27.4N 112.3W	10	LO	250	N	Y	19910405	173730	246	122	55	3
71	21	MEXICO	BAJA-LA PAZ BAY	26.0N 111.0W	27.3N 112.1W	0	LO	250	N	Y	19910405	173741	246	123	55	3
71	22	MEXICO	BAJA-CARMEN I.-SUNGLINT	27.0N 112.0W	27.3N 111.7W	0	NV	250	N	Y	19910405	173746	246	123	56	3
71	23	MEXICO	BAJA-CHIVATO POINT	27.0N 113.0W	27.2N 111.5W	5	LO	250	N	Y	19910405	173749	246	123	56	3
71	24	MEXICO	BAJA-LAGUNA SAN IGNACIO	28.0N 114.5W	27.2N 111.2W	0	LO	250	F	N	19910405	173754	246	124	56	3
71	25	MEXICO	BAJA-SEBASTIAN VIZCAINO	26.0N 108.0W	27.1N 110.3W	5	LO	250	N	Y	19910405	173807	246	124	57	3
71	26	MEXICO	RIO SINALOA-CANALS	25.0N 106.5W	26.9N 109.2W	5	LO	250	N	Y	19910405	173824	246	126	58	3
71	27	MEXICO	MNT FIRES-SOMALOMA RIVER	25.0N 106.5W	26.7N 108.2W	5	LO	250	U	Y	19910405	173839	246	127	59	3
71	28	MEXICO	MNT FIRES-LORENZO RIVER	25.0N 108.0W	26.6N 107.9W	20	LO	250	N	Y	19910405	173844	246	127	59	3
71	29	MEXICO	COAST-TACHICHTLITE I.	25.5N 108.0W	26.5N 106.8W	5	LO	250	N	Y	19910405	173900	246	129	60	3
71	30	MEXICO	GUAMUCHII, RESERVOIR	25.5N 109.0W	26.4N 106.5W	5	LO	250	N	Y	19910405	173904	246	129	60	3
71	31	MEXICO	OHVIRA BAY-FUZZY FOCUS	24.5N 107.0W	26.2N 105.5W	5	LO	250	N	Y	19910405	173920	246	130	61	3
71	32	MEXICO	LORENZO R.-RESERVOIR	25.0N 107.0W	26.2N 105.3W	5	LO	250	N	Y	19910405	173923	246	131	61	3
71	33	MEXICO	BADIRAGUATO R.-RESERVOIR	25.0N 100.5W	25.9N 103.8W	60	LO	250	N	Y	19910405	173946	246	133	62	3
71	34	MEXICO	SIERRA MADRE ORIENTAL	19.5N 95.5W	23.4N 94.2W	50	LO	250	N	Y	19910405	174216	245	151	70	3
71	35	MEXICO	BAY OF CAMPECHE	18.5N 94.5W	23.3N 93.9W	20	LO	250	N	Y	19910405	174220	245	151	70	3
71	36	MEXICO	BAY OF CAMPECHE	19.0N 92.5W	23.3N 93.7W	15	LO	250	N	Y	19910405	174224	245	152	70	3
71	37	MEXICO	B. OF CAMPECHE, FRONTERA	19.0N 91.5W	23.2N 93.5W	20	LO	250	N	Y	19910405	174226	245	152	71	3
71	38	MEXICO	B. CAMPECHE, L. DE TERMINOS	20.0N 91.0W	23.2N 93.4W	40	LO	250	N	Y	19910405	174229	245	153	71	3
71	39	MEXICO	YUCATAN P. B. OF CAMPECHE	21.0N 90.5W	23.1N 93.1W	60	LO	250	N	Y	19910405	174233	245	154	71	3
71	40	MEXICO	YUCATAN PENINSULA	21.5N 90.0W	23.0N 92.9W	60	LO	250	N	Y	19910405	174237	245	154	71	3
71	41	MEXICO	YUCATAN PENINSULA	19.0N 87.5W	22.7N 91.8W	60	LO	250	F	N	19910405	174254	245	157	72	3
71	42	MEXICO	CHINCHORRO BANK	21.5N 87.0W	22.4N 90.9W	25	LO	250	N	Y	19910405	174308	245	160	72	3
71	43	MEXICO	YUCATAN PEN.-NW TIP	21.5N 87.0W	22.1N 89.9W	25	LO	250	N	Y	19910405	174325	245	163	73	3
71	44	MEXICO	YUCATAN PEN.-NW TIP	20.5N 87.0W	21.8N 89.0W	60	LO	250	N	Y	19910405	174339	245	166	73	3
71	45	MEXICO	YUCATAN PEN.-COZUMEL	21.0N 87.5W	21.7N 88.7W	60	NV	250	N	Y	19910405	174344	245	167	74	3
71	46	MEXICO	YUCATAN PEN.-NW TIP	21.5N 88.0W	21.6N 88.5W	45	NV	250	N	Y	19910405	174347	245	168	74	3
71	47	MEXICO	YUCATAN PEN.-NORTH TIP	21.5N 88.0W	21.6N 88.5W	45	NV	250	N	Y	19910405	174347	245	168	74	3

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	LONG	NADIR LAT	LONG	CC	IL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
71	48	MEXICO	YUCATAN PEN.-NORTH TIP	21.5N	88.5W	21.5N	88.2W	50	NV	250	N	Y	19910405	174352	245	189	74	3
71	49	MEXICO	CAMPECHE-YUCATAN PEN.	20.0N	90.5W	21.3N	87.5W	45	LO	250	N	Y	19910405	174404	245	171	74	3
71	50	MEXICO	YUCATAN PEN.-WESTERN PART	20.5N	90.5W	21.2N	87.4W	60	LO	250	N	Y	19910405	174406	245	172	74	3
71	51	MEXICO	MERIDA-YUCATAN PENINSULA	21.0N	89.5W	21.2N	87.3W	65	LO	250	N	Y	19910405	174408	245	172	74	3
71	52	MEXICO	YUCATAN PEN.-NE TIP	21.5N	88.0W	21.0N	86.9W	45	LO	250	N	Y	19910405	174414	245	174	75	3
71	53	MEXICO	COZUMEL-FUZZY FOCUS	20.5N	87.0W	20.9N	86.6W	20	NV	250	F	N	19910405	174419	245	175	75	3
71	54	BELIZE	AMBERGRIS CAY	18.0N	88.0W	20.8N	86.2W	45	LO	250	N	Y	19910405	174425	245	177	75	3
71	55	BELIZE	CHETUMAL BAY	18.5N	88.0W	20.6N	85.8W	45	LO	250	N	Y	19910405	174433	245	179	75	3
71	56	BELIZE	TURNER ISLANDS	17.5N	87.5W	20.5N	85.5W	45	LO	250	N	Y	19910405	174437	245	180	75	3
71	57	BELIZE	COAST, REEFS, SHOALS	17.0N	88.0W	20.2N	84.7W	45	LO	250	N	Y	19910405	174451	245	183	75	3
71	58	BELIZE	AMBERGRIS, CORKER CAYS	18.0N	88.0W	19.9N	83.8W	50	LO	250	N	Y	19910405	174505	245	187	76	3
71	59	BELIZE	AMBERGRIS CAY	18.0N	88.0W	19.7N	83.2W	55	LO	250	N	Y	19910405	174515	244	190	76	3
71	60	MEXICO	ESPIRITO SANTO BAY	19.0N	88.0W	19.6N	83.1W	60	LO	250	N	Y	19910405	174517	244	190	76	3
71	61	MEXICO	YUCATAN PEN.-ASCENSION B	20.0N	87.5W	19.6N	83.0W	55	LO	250	N	Y	19910405	174519	244	191	76	3
71	62	CAYMAN ISLANDS	GRAND CAYMAN	19.5N	81.5W	19.3N	82.2W	15	NV	250	N	Y	19910405	174533	244	195	76	3
71	63	CAYMAN ISLANDS	GRAND CAYMAN	19.5N	81.5W	19.1N	81.8W	15	NV	250	N	Y	19910405	174540	244	197	76	3
71	64	CAYMAN ISLANDS	CAYMAN BRAC	19.5N	80.0W	18.8N	81.1W	20	NV	250	N	Y	19910405	174552	244	200	76	3
71	65	JAMAICA	EASTERN END	18.0N	76.0W	17.0N	76.8W	15	NV	250	N	Y	19910405	174706	244	221	75	3
71	66	JAMAICA	KINGSTON	18.0N	76.5W	16.9N	76.5W	20	LO	250	N	Y	19910405	174710	244	222	75	3
71	67	JAMAICA	KINGSTON	18.0N	77.0W	16.8N	76.3W	25	LO	250	N	Y	19910405	174714	244	223	75	3
71	68	JAMAICA	WESTERN END	18.0N	78.0W	16.7N	76.1W	25	LO	250	N	Y	19910405	174718	244	224	75	3
71	69	CARIBBEAN SEA	CIRRUS & LOW CLOUDS			15.8N	74.1W	25	LO	250	N	N	19910405	174753	244	232	74	3
71	70	VENEZUELA	GULF OF VENEZUELA	11.0N	71.5W	14.7N	71.7W	65	LO	250	N	Y	19910405	174835	244	241	73	3
71	71	VENEZUELA	MARACAIBO	11.0N	71.5W	14.5N	71.3W	65	LO	250	N	Y	19910405	174842	244	242	72	3
71	72	COLOMBIA	PEN. DELA GUAJIRA	12.5N	71.5W	14.2N	70.8W	80	LO	250	N	N	19910405	174852	244	244	72	3
71	73	BRAZIL	RIO UACA, CABO ORANGE	4.5N	51.5W	3.6N	51.2W	20	LO	250	N	N	19910405	175455	243	275	53	3
71	74	BRAZIL	AMAZON R. DELTA/EFFLUENT	1.0N	50.0W	2.7N	49.7W	20	LO	250	N	N	19910405	175525	243	276	51	3
71	75	ATLANTIC OCEAN	AMAZON R.-OCEAN INTERFAC			2.2N	48.8W	20	LO	250	N	N	19910405	175541	243	276	50	3
71	76	USA-HI	FRENCH FRIGATE SHOALS	24.0N	166.0W	28.0N	164.4W	45	LO	250	N	N	19910405	190411	246	99	30	4
71	77	MEXICO	BAJA-SOUTHERN TIP	23.0N	109.5W	23.5N	118.3W	5	LO	250	N	Y	19910405	191538	245	149	70	4
71	78	MEXICO	BAJA-LA PAZ BAY	24.0N	110.5W	23.4N	118.0W	5	LO	250	N	Y	19910405	191543	245	150	70	4
71	79	MEXICO	BAJA-MAGDALENA BAY	24.5N	111.5W	23.4N	117.8W	5	LO	250	N	Y	19910405	191546	245	150	70	4
71	80	PACIFIC OCEAN	WAVES			23.2N	117.2W	0	LO	250	N	N	19910405	191556	245	152	70	4
71	81	MEXICO	BAJA-SAN CRISTOBAL BAY	27.0N	115.0W	22.8N	115.9W	0	LO	250	N	N	19910405	191617	245	155	71	4
71	82	MEXICO	BAJA-LAGUNA SAN IGNACIO	26.5N	113.5W	22.7N	115.6W	5	LO	250	N	N	19910405	191622	245	156	72	4
71	83	MEXICO	BAJA-MAGDALENA BAY	24.5N	112.0W	22.5N	115.1W	0	LO	250	N	N	19910405	191630	245	157	72	4
71	84	PACIFIC OCEAN	S. GLINT-OIL SL., OC FRONT			21.9N	113.3W	0	LO	250	N	N	19910405	191659	245	163	73	4
71	85	PACIFIC OCEAN	SUNGLINT-OCEAN EDDIES			20.3N	108.8W	10	LO	250	N	N	19910405	191813	245	180	75	4
71	86	MEXICO	BANDERAS BAY	20.5N	105.5W	18.1N	103.3W	55	LO	250	N	N	19910405	191947	244	207	76	4
72	1	PACIFIC OCEAN	CLOUDS-CLOUD LINE			28.3N	122.1W	60	LO	100	N	N	19910405	173513	246	113	46	3

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		MADIR		CC	TL	FL	E	S	DATE	GMT	AL	SUN	EL	OR
				LAT	LONG	LAT	LONG									AZ		
72	2	MEXICO	SIERRA MADRE OCC.-FIRES	22.0N	105.0W	26.5N	107.3W	15	LO	100	N	N	19910405	173853	246	128	59	3
72	3	MEXICO	SIERRA MADRE ORIENTAL	25.5N	100.5W	25.3N	101.4W	40	LO	100	N	Y	19910405	174023	245	136	64	3
72	4	MEXICO	SIERRA MADRE ORIENTAL	24.5N	101.5W	25.2N	100.7W	10	NV	100	N	Y	19910405	174034	245	137	65	3
72	5	MEXICO	COAST-GULF OF MEXICO	23.0N	98.0W	25.0N	99.9W	65	LO	100	N	N	19910405	174046	245	138	65	3
72	6	MEXICO	YUCATAN PEN-COZUMEL	21.0N	87.0W	21.6N	88.5W	45	LO	100	N	Y	19910405	174348	245	167	74	3
72	7	MEXICO	YUCATAN PEN-COZUMEL	21.5N	87.0W	21.4N	87.9W	45	NV	100	N	Y	19910405	174358	245	169	74	3
72	8	MEXICO	YUCATAN P-COZUMEL-BRIGHT	21.5N	87.0W	21.2N	87.3W	45	NV	100	N	Y	19910405	174407	245	171	74	3
72	9	MEXICO	TURNERFE ISLANDS	17.0N	87.5W	20.1N	84.4W	50	LO	100	N	N	19910405	174455	245	183	75	3
72	10	CUBA	GULF OF BATABANO	22.0N	82.5W	19.8N	83.5W	45	LO	100	N	Y	19910405	174511	244	187	76	3
72	11	CUBA	CORTES BAY	22.0N	84.0W	19.6N	83.0W	60	LO	100	N	Y	19910405	174520	244	190	76	3
72	12	CUBA	PEN. DE ZAPATA	22.5N	81.5W	19.4N	82.7W	60	LO	100	N	Y	19910405	174525	244	191	76	3
72	13	CAYMAN ISLANDS	GRAND CAYMAN	19.5N	81.0W	18.9N	81.4W	15	NV	100	N	N	19910405	174547	244	197	76	3
72	14	CUBA	MIDDLE-SOUTHERN PART	21.5N	79.5W	18.8N	80.9W	45	LO	100	N	Y	19910405	174554	244	199	76	3
72	15	CUBA	MIDDLE-NORTHERN PART	22.5N	79.0W	18.4N	80.1W	50	LO	100	N	Y	19910405	174608	244	203	76	3
72	16	JAMAICA	WHOLE ISLAND-CLOUDS	18.0N	77.5W	17.8N	78.6W	30	NV	100	N	N	19910405	174634	244	211	76	3
72	17	JAMAICA	PEDRO CAYS-VERY BRIGHT	17.0N	77.5W	17.4N	77.8W	20	NV	100	N	Y	19910405	174648	244	215	76	3
72	18	HAITI	DU SUC CHANNEL	18.5N	73.5W	16.4N	76.5W	35	LO	100	N	N	19910405	174728	244	225	75	3
72	19	CUBA	EASTERN END	20.5N	76.5W	16.1N	74.8W	45	LO	100	N	N	19910405	174741	244	228	75	3
72	20	DOMINICAN REPUBLIC	LAKE ENRIQUILLO	18.5N	71.5W	15.3N	73.1W	40	LO	100	N	Y	19910405	174810	244	235	74	3
72	21	DOMINICAN REPUBLIC	COAST-CARIBBEAN SEA	18.0N	70.5W	15.1N	72.7W	40	LO	100	N	Y	19910405	174817	244	236	73	3
72	22	VENEZUELA	RIO ORINOCO	8.5N	62.5W	8.9N	60.6W	85	LO	100	N	Y	19910405	175158	243	265	63	3
72	23	VENEZUELA	RIO GRANDE DELTA	9.0N	60.5W	8.4N	59.7W	70	NV	100	N	Y	19910405	175215	243	266	62	3
72	24	PACIFIC OCEAN	OPEN CONVECTION CELLS			28.4N	157.1W	90	LO	100	N	N	19910405	190557	246	104	36	4
72	25	PACIFIC OCEAN	TRADE WINDS CLOUDS			28.5N	156.0W	85	HO	100	N	N	19910405	190613	246	105	37	4
72	26	PACIFIC OCEAN	TRADE WINDS CLOUDS			28.5N	154.3W	40	LO	100	N	Y	19910405	190639	246	106	38	4
72	27	PACIFIC OCEAN	TRADE WINDS CLOUDS			28.5N	151.8W	40	LO	100	N	Y	19910405	190714	246	108	41	4
72	28	PACIFIC OCEAN	TRADE WINDS CLOUDS			28.4N	147.3W	70	LO	100	N	N	19910405	190820	246	111	45	4
72	29	PACIFIC OCEAN	CLOSED CONVECTION CLOUDS			26.7N	131.8W	90	LO	100	N	N	19910405	191210	246	126	58	4
72	30	USA-CA	SALTON SEA-CA COAST	33.5N	116.5W	24.9N	123.5W	20	HO	100	N	Y	19910405	191417	245	138	65	4
72	31	USA-CA	CA COAST-SAN CLEMENTE I.	34.0N	117.0W	24.7N	122.8W	20	HO	100	N	Y	19910405	191427	245	139	66	4
72	32	USA-CA	SALTON SEA-CA COAST	33.5N	116.0W	24.2N	121.0W	10	HO	100	N	N	19910405	191456	245	142	67	4
72	33	MEXICO	BAJA-SANTA ROSALIA BAY	28.5N	114.0W	24.1N	120.3W	10	HO	100	N	N	19910405	191507	245	144	68	4
72	34	MEXICO	SIERRA MADRE OCCID.-BAJA			23.3N	117.6W	20	HO	100	N	N	19910405	191549	245	150	70	4
72	35	MEXICO	COAST-SIERRA MADRE OCCID	21.5N	104.5W	20.6N	109.7W	45	HO	100	N	Y	19910405	191759	245	175	75	4
72	36	MEXICO	MEXICAN PLATEAU			20.2N	108.5W	25	HO	100	N	N	19910405	191819	245	180	75	4
72	37	MEXICO	COAST-SIERRAMADRE DELSUR	17.0N	99.0W	18.9N	105.3W	20	LO	100	N	N	19910405	191913	244	195	76	4
72	38	HONDURAS	COAST-FONSECA GULF	13.0N	87.5W	18.2N	103.4W	45	LO	100	N	Y	19910405	191945	244	204	76	4
72	39	NICARAGUA	LAGO DE NICARAGUA	11.0N	85.5W	12.9N	92.0W	35	LO	100	N	Y	19910405	192306	244	250	71	4
72	40	PANAMA	LAGUNA DE CHIRIQUI	8.5N	82.5W	11.4N	89.2W	50	LO	100	N	Y	19910405	192358	243	257	68	4
72	41	PANAMA	LAGUNA DE CHIRIQUI	9.0N	82.0W	10.0N	86.4W	30	LO	100	N	Y	19910405	192449	243	262	66	4

TABLE 4.3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	LONG	NADIR LAT	LONG	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL	OR
72	42	PANAMA	CERRO SANTIAGO	8.5N	82.0W	8.0N	80.6W	40	LO	100	M	Y	19910405	192637	243	270	60	4
72	43	PANAMA	BAY OF PANAMA	9.0N	79.5W	6.3N	79.7W	70	LO	100	M	Y	19910405	192655	243	271	59	4
72	44	PANAMA	BAY OF PANAMA	8.5N	79.5W	5.9N	79.1W	70	LO	100	M	Y	19910405	192706	243	271	58	4
72	45	PANAMA	BAY OF PANAMA-BRIGHT			5.0N	79.6W	80	LO	100	O	Y	19910405	192716	243	272	57	4
72	46	PANAMA	BAY OF PANAMA-BRIGHT			5.2N	77.9W	80	LO	100	O	Y	19910405	192729	243	272	57	4
72	47	PANAMA	BAY OF PANAMA-BRIGHT			4.9N	77.3W	80	LO	100	O	Y	19910405	192740	243	273	56	4
72	48	PANAMA	BAY OF PANAMA-BRIGHT			4.0N	76.8W	90	LO	100	O	Y	19910405	192750	243	273	55	4
72	49	PANAMA	BAY OF PANAMA-BRIGHT			4.2N	78.1W	90	LO	100	O	Y	19910405	192802	243	274	55	4
72	50	PANAMA	CIRRUS, CUMULUS CLOUDS			1.7N	71.8W	90	LO	100	M	Y	19910405	192924	243	277	50	4
72	51	SOUTH AMERICA	STORM CELL, RIVER			0.2N	89.3W	80	LO	100	M	Y	19910405	193013	243	278	47	4
72	52	BRAZIL	ARAGUAIA R. DEFORESTATION	10.0S	50.5W	8.3S	54.3W	25	LO	100	M	Y	19910405	193457	242	281	29	4
72	53	BRAZIL	ARAGUAIA R.-AGRICULTURE	9.5S	50.0W	8.9S	53.3W	20	LO	100	M	Y	19910405	193516	242	281	28	4
72	54	BRAZIL	RIO ARAGUAIA	9.0S	49.5W	9.8S	51.6W	20	LO	100	M	Y	19910405	193548	242	281	26	4
72	55	BRAZIL	RIO TOCANTINS	12.5S	47.5W	10.5S	50.4W	15	LO	100	M	Y	19910405	193611	242	281	25	4
72	56	BRAZIL	RIO PARANA	13.5S	47.0W	10.8S	49.8W	15	LO	100	M	Y	19910405	193622	242	281	24	4
72	57	BRAZIL	RIO TOCANTINS	9.0S	48.0W	12.5S	46.5W	35	LO	100	M	Y	19910405	193722	243	281	20	4
72	58	BRAZIL	RIO TOCANTINS	8.5S	48.0W	12.7S	46.0W	45	LO	100	M	Y	19910405	193730	243	281	20	4
72	59	BRAZIL	NE OF TOCANTINS R. & 8.0S			13.3S	44.8W	40	LO	100	M	Y	19910405	193752	243	281	19	4
72	60	BRAZIL	RIO SAO FRANCISCO, RES.	10.5S	42.5W	13.9S	43.8W	20	LO	100	M	Y	19910405	193811	243	281	17	4
72	61	BRAZIL	RIO SAO FRANCISCO, RES.	10.0S	42.0W	14.2S	43.1W	20	LO	100	M	Y	19910405	193823	243	281	17	4
72	62	BRAZIL	RIO SAO FRANCISCO, RES.	11.0S	42.5W	14.5S	42.5W	20	LO	100	M	Y	19910405	193834	243	280	16	4
72	63	BRAZIL	RIO SAO FRANCISCO, RES.	10.0S	41.5W	14.7S	42.0W	20	LO	100	M	Y	19910405	193843	243	280	15	4
72	64	BRAZIL	BAIA DE TODOS OS SANTOS	13.0S	38.5W	15.8S	39.3W	20	LO	100	M	Y	19910405	193930	243	280	12	4
72	65	BRAZIL	SALVADOR-COAST	13.0S	38.5W	16.2S	38.8W	20	LO	100	M	Y	19910405	193939	243	280	12	4
72	66	BRAZIL	SALVADOR-COAST	13.0S	39.0W	16.4S	38.2W	25	LO	100	M	Y	19910405	193949	243	280	11	4
72	67	BRAZIL	CLOUDS-HALF FRAME EXPOSE			18.2S	34.1W	95	LO	100	M	Y	19910405	194101	243	278	7	4
72	68	PHILIPPINES	BUSUANGA I.-SHUTTLE TAIL			19.7N	113.7E	90	HO	100	M	Y	19910405	220211	245	81	-4	6
72	69	PHILIPPINES	BUSUANGA I.-SHUTTLE TAIL			19.9N	114.1E	90	HO	100	M	Y	19910405	220217	245	82	-3	6
72	70	PHILIPPINES	BUSUANGA I.-SHUTTLE TAIL			20.0N	114.4E	90	HO	100	M	Y	19910405	220223	245	82	-3	6
72	71	PHILIPPINES	SHUTTLE TAIL-UNDEREXPOSED			20.1N	114.8E	90	HO	100	U	Y	19910405	220229	245	82	-3	6
72	72	PHILIPPINES	SHUTTLE TAIL-CLOUDS			20.2N	114.8E	90	HO	100	U	Y	19910405	220230	245	82	-3	6
72	73	PHILIPPINES	SHUTTLE TAIL-CLOUDS			20.6N	116.0E	95	HO	100	N	Y	19910405	220250	245	82	-1	6
72	74	PHILIPPINES	SHUTTLE TAIL-CLOUDS			20.8N	116.5E	80	HO	100	N	Y	19910405	220257	245	82	-1	6
72	75	PHILIPPINES	SHUTTLE TAIL-CLOUDS			20.9N	116.9E	80	HO	100	N	Y	19910405	220305	245	83	-0	6
72	76	PHILIPPINES	SHUTTLE TAIL-CLOUDS			21.2N	117.6E	80	HO	100	O	Y	19910405	220316	245	83	-0	6
72	77		GRO-MANIPULATOR ARM			26.1N	135.1E	90	HO	100	N	Y	19910405	220753	246	91	17	6
72	78		GRO-MANIPULATOR ARM			26.3N	136.3E	90	HO	100	N	Y	19910405	220812	246	92	18	6
72	79	PACIFIC OCEAN	CLOUDS			19.2N	177.5W	30	LO	100	N	Y	19910405	235922	245	186	76	7
72	80	ASIA	LARGE STORM CELLS			25.1N	83.1E	95	HO	100	O	N	19910406	011341	246	88	12	8
72	81	CHINA	HSI-HSIA PANG MA MNTS.	28.5N	86.0E	25.3N	83.7E	70	LO	100	N	Y	19910406	011350	246	89	12	8

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	CENTER LON	NADIR LAT	NADIR LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
72	82	CHINA	TIBET PLATEAU	29.0N	87.0E	25.4N	84.3E	85	LO	100	N	Y	19910406	011359	246	89	13	8
72	83	CHINA	NA-MU LAKE	31.5N	91.0E	26.1N	87.4E	20	HO	100	N	Y	19910406	011447	246	91	16	8
72	84	CHINA	CH'L-LIN LAKE	32.0N	89.5E	26.2N	87.8E	15	HO	100	N	Y	19910406	011453	246	91	16	8
72	85	CHINA	TIBET PLATEAU-CHEKU LAKE	28.5N	92.0E	26.3N	88.7E	45	LO	100	N	Y	19910406	011508	246	91	17	8
72	86	CHINA	BRAMAPUTRA RIVER	29.5N	91.0E	26.6N	90.3E	15	LO	100	N	Y	19910406	011530	246	92	19	8
72	87	CHINA	PANORAMA TIBETAN PLATEAU			26.8N	91.2E	30	HO	100	N	Y	19910406	011544	246	93	19	8
72	88	SHUTAN	G.HIMALAYA RAN.-P'U-MU L	28.0N	91.0E	27.1N	93.1E	10	LO	100	N	Y	19910406	011613	246	94	21	8
72	89	CHINA	CHE KU LAKE-HIMALAYAS	28.5N	92.5E	27.2N	94.1E	25	LO	100	N	Y	19910406	011628	246	94	22	8
72	90	CHINA	NIEN CH'ING T'ANG KU MNT	31.0N	93.0E	27.4N	95.1E	20	LO	100	N	Y	19910406	011643	246	95	23	8
72	91	CHINA	NIEN CH'ING T'ANG KU MNT	29.5N	90.5E	27.5N	95.7E	10	HO	100	N	Y	19910406	011651	246	95	24	8
72	92	CHINA	GREAT HIMALAYA RANGE			28.1N	101.9E	25	HO	100	N	Y	19910406	011823	246	99	29	8
72	93	CHINA	GREAT HIMALAYA RANGE			28.2N	102.3E	30	HO	100	N	Y	19910406	011829	246	99	30	8
72	94	CHINA	FOLDED MOUNTAINS			28.3N	104.0E	50	LO	100	N	Y	19910406	011853	246	100	31	8
72	95	CHINA	FOLDED MOUNTAINS			28.3N	104.7E	70	HO	100	N	Y	19910406	011904	246	101	32	8
72	96	CHINA	FOLDED MOUNTAINS-KARST			28.4N	105.8E	50	LO	100	N	Y	19910406	011920	246	101	33	8
72	97	CHINA	FOLDED MOUNTAINS-KARST			28.5N	109.5E	50	LO	100	N	Y	19910406	012013	246	104	36	8
72	98	INDIA	MANGALORE-SUNGLINT	13.0N	74.5E	13.6N	75.7E	10	NV	100	N	Y	19910406	075013	244	240	75	12
72	99	INDIA	BHADRA RESERVOIR	13.5N	75.5E	13.3N	76.2E	15	NV	100	N	Y	19910406	075023	244	242	75	12
72	100	INDIA	KHRISHNARAJA SAGARA	12.5N	77.0E	12.9N	77.1E	45	NV	100	N	Y	19910406	075038	244	245	74	12
72	101	INDIA	PALAR RIVER	13.5N	79.0E	12.1N	78.6E	40	LO	100	N	Y	19910406	075106	244	250	73	12
72	102	INDIA	PALAR RIVER	12.5N	79.5E	11.7N	79.4E	40	NV	100	N	Y	19910406	075121	244	252	72	12
72	103	INDIA	COAST-SUNGLINT-PALAR R.	11.5N	80.5E	10.9N	81.0E	25	NV	100	N	Y	19910406	075149	244	256	71	12
72	104	ALGERIA	HAMADA DU GUIR	30.5N	3.0W	28.5N	7.5W	10	LO	100	N	Y	19910406	090759	247	104	36	13
72	105	ALGERIA	SARAHAN ATLAS	33.0N	2.0W	28.5N	7.1W	15	HO	100	N	Y	19910406	090805	247	104	37	13
72	106	ALGERIA	KAHAL TABELBALA	29.0N	1.0W	28.5N	5.0W	0	LO	100	N	Y	19910406	090836	247	106	38	13
72	107	ALGERIA	ATLAS MOUNTAINS	34.0N	2.5W	28.5N	4.5W	10	LO	100	N	Y	19910406	090843	247	106	39	13
73	1		CARGO BAY, DARK.			22.9S	19.4W		LO	50	N	Y	19910406	190608	243	277	0	19
73	2		BLANK			27.9S	6.6E		LO	50	N	Y	19910406	191244	243	264	-24	19
73	3	GALAPAGOS ISLANDS	ISABELA, FERNANDINA ISLS.	0.4S	91.4W	1.6N	93.5W	60	LO	100	N	Y	19910406	202430	243	279	57	20
73	4	GALAPAGOS ISLANDS	ISLA SAN CRISTOBAL	0.8S	89.5W	0.1N	90.9W	30	LO	250	N	Y	19910406	202520	243	281	54	20
73	5	GALAPAGOS ISLANDS	ISLA SANTA CRUZ	0.6S	90.4W	0.0N	90.8W	50	LO	250	N	Y	19910406	202523	243	281	54	20
73	6	GALAPAGOS ISLANDS	ISLA ISABELA	0.8S	91.1W	0.2S	90.5W	60	LO	250	N	Y	19910406	202527	243	281	54	20
73	7	GALAPAGOS ISLANDS				0.4S	90.1W	15	LO	250	N	Y	19910406	202535	243	281	53	20
73	8	PERU	CHICLAYO, COAST, AGRICULT.	6.8S	79.5W	6.5S	79.6W	60	LO	250	N	Y	19910406	202855	243	284	41	20
73	9	PERU	VERY CLOUDY			6.7S	79.3W	99	LO	250	N	Y	19910406	202901	243	284	41	20
73	10	PERU	E. ANDES MTS., HUALLAGA R	6.8S	76.8W	6.9S	78.9W	50	LO	250	N	Y	19910406	202908	243	284	40	20
73	11	PERU	E. ANDES MTS., HUALLAGA R	7.5S	76.6W	7.0S	78.7W	60	LO	250	N	Y	19910406	202913	243	284	40	20
73	12	PERU	HUALLAGA R., YURIMAGUAS	6.3S	75.8W	7.2S	78.4W	60	LO	250	N	Y	19910406	202919	243	284	39	20
73	13	PERU	HUALLAGA R., YURIMAGUAS	5.3S	75.7W	7.7S	77.5W	70	LO	250	N	Y	19910406	202936	243	284	38	20
73	14	PERU	HUALLAGA & MARANON RIOS	5.0S	75.5W	8.1S	76.7W	60	LO	250	N	Y	19910406	202950	243	284	37	20



TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	LONG	NADIR LAT	LONG	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
73	15	PERU	UCAVALI & PACHITEA RIOS	8.9S	74.6W	8.3S	76.3W	60	LO	250	N	N	19910406	202957	243	284	37	20
73	16	PERU	RIO UCAYALI	9.5S	74.3W	8.4S	76.1W	50	LO	250	N	N	19910406	203001	243	284	37	20
73	17	PERU	TAMBO & URUBAMBA RIOS	10.8S	73.8W	8.5S	76.0W	60	LO	250	N	N	19910406	203004	243	284	37	20
73	18	PERU	RIO UCAYALI & PUCALLPA	8.0S	74.7W	9.2S	74.7W	60	LO	250	N	N	19910406	203027	243	284	35	20
73	19	PERU	RIO UCAYALI	7.9S	74.6W	9.4S	74.4W	80	LO	250	N	N	19910406	203034	243	284	35	20
73	20	PERU	RAINFOREST			9.5S	74.2W	70	LO	250	N	N	19910406	203037	243	284	35	20
73	21	PERU	RAINFOREST			9.6S	73.9W	80	LO	250	N	N	19910406	203042	243	284	34	20
73	22	PERU	RAINFOREST			10.0S	73.2W	70	LO	250	N	N	19910406	203055	243	284	33	20
73	23	PERU	RAINFOREST			10.2S	72.9W	60	LO	250	N	N	19910406	203101	243	284	33	20
73	24	PERU	RAINFOREST			10.4S	72.5W	70	LO	250	N	N	19910406	203108	243	284	33	20
73	25	PERU	RAINFOREST			10.9S	71.5W	90	LO	250	N	N	19910406	203127	243	284	31	20
73	26	PERU				11.3S	70.8W	60	LO	250	N	N	19910406	203140	243	284	31	20
73	27	PERU	EAST LOWLANDS			11.4S	70.5W	60	LO	250	N	N	19910406	203145	243	284	30	20
73	28	PERU	EAST LOWLANDS			11.6S	70.1W	60	LO	250	N	N	19910406	203152	243	284	30	20
73	29	PERU	MOUNTAINOUS TERRAIN			12.5S	68.4W	70	LO	250	N	N	19910406	203223	243	284	28	20
73	30	BOLIVIA	SWAMPY LOWLANDS			16.5S	60.1W	70	LO	250	N	N	19910406	203452	243	283	18	20
73	31	BOLIVIA	SWAMPY LOWLANDS			16.9S	59.2W	90	LO	250	N	N	19910406	203507	243	282	18	20
73	32	USA-HI	MIDWAY ISLANDS	28.2N	177.3W	26.5N	176.9W	30	LO	250	N	N	19910406	214052	246	117	53	21
73	33	USA-HI	KURE & GREEN ISLANDS	28.4N	176.2W	26.2N	175.4W	10	LO	250	N	N	19910406	214111	246	118	54	21
73	34	USA-HI	LISANSKI IS., NEVA SHOAL	26.0N	174.0W	25.9N	173.4W	10	LO	250	N	N	19910406	214138	246	120	56	21
73	35	USA-HI	LISANSKI IS., NEVA SHOAL			25.4N	171.6W	30	LO	250	N	N	19910406	214208	246	121	58	21
73	36	USA-HI	FRENCH FRIGATE SHOALS	23.8N	166.2W	24.6N	168.3W	20	LO	250	N	N	19910406	214300	246	125	61	21
73	37	USA-HI	FRENCH FRIGATE SHOALS	23.8N	166.2W	24.1N	166.3W	20	LO	250	N	N	19910406	214330	246	127	63	21
73	38	USA-HI	KAUIA	21.9N	160.2W	22.5N	160.9W	20	LO	250	N	N	19910406	214457	245	134	68	21
73	39	USA-HI	KAUIA	22.0N	159.5W	22.2N	160.0W	50	LO	250	N	N	19910406	214512	245	136	69	21
73	40	USA-HI	OAHUA	21.5N	158.0W	21.3N	157.5W	50	LO	250	N	N	19910406	214553	245	141	71	21
73	41	USA-HI	OAHUA	21.5N	158.0W	21.3N	157.2W	50	LO	250	N	N	19910406	214557	245	141	71	21
73	42	USA-HI	MAUI	20.9N	156.6W	20.6N	155.4W	60	LO	250	N	N	19910406	214627	245	145	73	21
73	43	USA-HI	HAWAII	19.5N	155.6W	20.2N	154.4W	50	LO	250	N	N	19910406	214644	245	148	74	21
73	44	IRAQ	BAGHDAD	33.4N	43.8E	25.5N	44.9E	0	LO	250	N	N	19910407	070240	246	117	55	27
73	45	IRAQ	SO. OF BAGHDAD	32.0N	45.6E	25.4N	45.5E	0	LO	250	N	N	19910407	070250	246	118	56	27
73	46	IRAQ	BASRAH AREA	30.5N	47.8E	25.1N	46.7E	0	LO	250	N	N	19910407	070308	246	119	57	27
73	47	KUWAIT	OIL WELL FIRES	29.1N	48.0E	24.3N	49.7E	0	LO	250	N	N	19910407	070355	246	122	60	27
73	48	BAHRAIN	BAHRAIN, SAUDI ARABIA	25.9N	51.2E	23.9N	51.1E	20	LO	250	N	N	19910407	070418	246	123	61	27
73	49	SAUDI ARABIA	BAHRAIN AREA	26.6N	50.1E	23.7N	52.1E	10	LO	250	N	N	19910407	070433	246	124	62	27
73	50	UNITED ARAB EMIRATES	COAST	24.3N	52.7E	23.3N	53.4E	40	LO	250	N	N	19910407	070454	246	126	63	27
73	51	UNITED ARAB EMIRATES	ASH SHARIQAH AREA			22.6N	55.5E	80	LO	250	N	N	19910407	070527	246	128	65	27
73	52	OMAN	PIPELINES AND ROADS			21.9N	57.7E	0	LO	250	N	N	19910407	070603	246	131	67	27
73	53	SAUDI ARABIA	E. TIP RUB AL KHALI			21.5N	59.0E	0	LO	250	N	N	19910407	070624	246	133	69	27
73	54	OMAN	AL MASIRAH AREA	20.5N	58.9E	20.4N	62.0E	10	LO	250	N	N	19910407	070715	246	138	72	27

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		MADIR		CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN	EL	OR
				LAT	LONG	LAT	LONG												
73	55	AUSTRALIA-NT	LAKE WOODS	18.0S	132.0E	16.9S	133.7E	20	NV	250	N	N	19910407	072911	243	284	21	27	
73	56	AUSTRALIA-NT	LAKE WOODS	18.0S	134.0E	17.0S	133.9E	30	NV	250	N	N	19910407	072915	243	284	20	27	
73	57	AUSTRALIA-NT		18.5S	134.5E	17.4S	134.9E	60	NV	250	N	N	19910407	072931	243	284	19	27	
73	58	AUSTRALIA-NT	EDWARD PELLEW GROUP ISLS	16.0S	137.2E	18.5S	137.4E	20	LO	250	N	N	19910407	073015	243	283	17	27	
73	59	AUSTRALIA-NT	COAST, SE. OF VANDERLIN	16.5S	138.0E	18.6S	137.7E	20	LO	250	N	N	19910407	073019	243	283	16	27	
73	60	AUSTRALIA-Q	COAST, W. OF WELLESLEY IS.	16.7S	138.6E	18.7S	138.1E	20	LO	250	N	N	19910407	073026	243	283	16	27	
73	61	AUSTRALIA-Q	SO. WELLESLEY ISLANDS	17.0S	139.2E	18.9S	138.4E	60	LO	250	N	N	19910407	073032	243	283	16	27	
73	62	AUSTRALIA-Q	WAGABOONYAH MTN. RANGE			19.3S	139.5E	60	LO	250	N	N	19910407	073050	243	282	14	27	
73	63	AUSTRALIA-Q	WAGABOONYAH MTN. RANGE			19.4S	139.7E	50	LO	250	N	N	19910407	073054	243	282	14	27	
73	64	AUSTRALIA-Q	PAROO MTN. RANGE			19.5S	140.0E	40	LO	250	N	N	19910407	073059	243	282	14	27	
73	65	AUSTRALIA-Q	STANDISH, SELWYN RANGES			19.6S	140.3E	50	LO	250	N	N	19910407	073103	243	282	14	27	
73	66	AUSTRALIA-Q	STANDISH, SELWYN RANGES			19.7S	140.5E	50	LO	250	N	N	19910407	073107	243	282	13	27	
73	67	AUSTRALIA-Q	STANDISH, SELWYN RANGES			20.0S	141.3E	40	LO	250	N	N	19910407	073120	243	282	13	27	
73	68	AUSTRALIA-Q	CLONCURRY AREA			20.1S	141.6E	40	LO	250	N	N	19910407	073125	243	282	12	27	
73	69	AUSTRALIA-Q	AREA E. OF CLONCURRY			20.2S	141.9E	40	LO	250	N	N	19910407	073131	243	281	12	27	
73	70	AUSTRALIA-Q	N. CENTRAL QUEENSLAND			20.5S	142.7E	30	LO	250	N	N	19910407	073144	243	281	11	27	
73	71	AUSTRALIA-Q	N. CENTRAL QUEENSLAND			20.6S	142.9E	30	LO	250	N	N	19910407	073147	243	281	11	27	
73	72	AUSTRALIA-Q	N. CENTRAL QUEENSLAND			20.7S	143.3E	20	LO	250	N	N	19910407	073153	243	281	10	27	
73	73	AUSTRALIA-Q	N. CENTRAL QUEENSLAND			21.2S	144.6E	40	LO	250	N	N	19910407	073216	243	281	9	27	
73	74	ALGERIA	NW ALGERIA, MTNS TERRAIN			28.5N	7.3W	10	LO	250	N	N	19910407	082907	246	98	28	28	
73	75	ALGERIA	HAMADA TOUNASSINE AREA			28.5N	6.1W	0	LO	250	N	N	19910407	082925	247	99	30	28	
73	76	ALGERIA	HAMADA TOUNASSINE AREA			28.5N	3.0W	0	LO	250	N	N	19910407	083009	247	101	32	28	
73	77	ALGERIA	KAHAL TABELBALA AREA	29.5N	2.3W	28.5N	2.3W	0	LO	250	N	N	19910407	083019	247	101	33	28	
73	78	ALGERIA	MAJOR N-S TRADE ROUTE			28.4N	1.2W	0	LO	250	N	N	19910407	083035	247	102	34	28	
73	79	ALGERIA	MAJOR N-S TRADE ROUTE			28.4N	0.9W	0	LO	250	N	N	19910407	083040	247	102	34	28	
73	80	ALGERIA	TADEMAIT PLATEAU	27.6N	1.5E	28.3N	1.6E	0	NV	250	N	N	19910407	083117	247	103	37	28	
73	81	ALGERIA	TADEMAIT PLATEAU			28.2N	3.3E	0	LO	250	N	N	19910407	083141	247	104	38	28	
73	82	ALGERIA	TADEMAIT PLATEAU			28.1N	4.0E	0	LO	250	N	N	19910407	083151	247	105	39	28	
73	83	ALGERIA	TINRHERT PLATEAU			27.9N	5.9E	0	LO	250	N	N	19910407	083219	247	106	41	28	
73	84	ALGERIA	TINRHERT PLATEAU			27.8N	6.9E	0	LO	250	N	N	19910407	083235	247	107	42	28	
73	85	ALGERIA	TINRHERT PLATEAU			27.8N	7.7E	0	LO	250	N	N	19910407	083246	247	107	42	28	
73	86	LIBYA	STONEVY DESERT AREA			27.6N	9.0E	0	LO	250	N	N	19910407	083305	247	108	43	28	
73	87	LIBYA	HAMMADAT MARZUQ, CTR PVT	26.5N	13.0E	27.2N	12.2E	0	LO	250	N	N	19910407	083353	246	110	46	28	
73	88	LIBYA	HAMMADAT MARZUQ, CTR PVT			27.0N	13.0E	0	LO	250	N	N	19910407	083405	246	111	47	28	
73	89	LIBYA	RAMLA EL MARZUCHIA	26.2N	15.2E	26.8N	14.6E	0	LO	250	N	N	19910407	083429	246	112	49	28	
73	90	LIBYA	RAMLA EL MARZUCHIA	26.2N	15.2E	26.7N	15.1E	0	LO	250	N	N	19910407	083437	246	112	49	28	
73	91	LIBYA	QUR AL FARID			26.5N	16.4E	0	LO	250	N	N	19910407	083456	246	113	50	28	
73	92	LIBYA	VOLCANO OF THE FLIES			26.2N	17.8E	0	LO	250	N	N	19910407	083517	246	114	52	28	
73	93	LIBYA				25.8N	19.5E	0	LO	250	N	N	19910407	083544	246	116	53	28	
73	94	LIBYA	AL JAWF, CTR. PIVOT IR	24.2N	23.3E	25.1N	22.7E	0	LO	250	N	N	19910407	083633	246	118	56	28	

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	SUN AZ	EL	OR
73	95	LIBYA	SE., JABAL ARKENU	24.6N	24.7E	0	LO	250	N	N	19910407	083704	246	120	58	28
73	96	SUDAN	NW SUDAN	23.7N	27.9E	40	LO	250	N	N	19910407	083754	246	123	61	28
73	97	EGYPT	SINAI, RED SEA, GU. AQABA	29.5N	34.6E	0	HO	250	N	N	19910407	083828	246	125	63	28
73	98	EGYPT	SINAI, RED SEA, GU. AQABA	28.5N	34.8E	0	HO	250	N	N	19910407	083840	246	126	64	28
73	99	EGYPT	NILE RIVER	26.0N	32.0E	0	LO	250	N	N	19910407	083858	246	127	65	28
73	100	EGYPT	NILE RIVER	26.0N	32.8E	0	LO	250	N	N	19910407	083923	246	129	67	28
73	101	SUDAN	E. COAST, RAS ABU SHAGARA	21.1N	37.2E	10	LO	250	N	N	19910407	083954	246	132	69	28
73	102	SUDAN	GULF OF AQIQ	18.1N	38.5E	10	LO	250	N	N	19910407	084048	246	137	72	28
73	103	RED SEA	SHIP WAKES, OIL SLICKS	19.8N	39.8E	20	LO	250	N	N	19910407	084108	245	140	73	28
73	104	RED SEA	SUN GLINT, SURFACE PATTERN	19.6N	40.1E	20	LO	250	N	N	19910407	084113	245	140	73	28
74	1	MALAWI	LAKE CHILWA AREA	15.4S	35.7E	60	LO	250	N	N	19910409	122525	245	294	42	61
74	2	MALAWI	LAKE CHILWA AREA	15.0S	35.9E	70	LO	250	N	N	19910409	122528	245	294	42	61
74	3	MALAWI	LAKE CHILWA AREA	14.9S	36.0E	70	LO	250	N	N	19910409	122535	245	294	42	61
74	4	MOZAMBIQUE		16.2S	40.6E	60	LO	250	N	N	19910409	122547	245	294	41	61
74	5	MOZAMBIQUE	COASTLINE, SEDIMENT	17.0S	42.3E	70	LO	250	N	N	19910409	122617	245	294	39	61
74	6	MOZAMBIQUE	COASTLINE, SEDIMENT	17.3S	42.9E	70	LO	250	N	N	19910409	122627	245	293	39	61
74	7	MOZAMBIQUE	COASTLINE, SEDIMENT	17.8S	44.1E	70	LO	250	N	N	19910409	122648	245	293	37	61
74	8	MOZAMBIQUE	BELO SUR TSIRIBITHINA	19.6S	44.6E	70	LO	250	N	N	19910409	122808	245	292	32	61
74	9	MOZAMBIQUE	TSIRIBITHINA RIVER	19.5S	45.3E	70	LO	250	N	N	19910409	122813	245	291	32	61
74	10	MOZAMBIQUE	TSIRIBITHINA RIVER	19.7S	45.3E	70	LO	250	N	N	19910409	122820	245	291	31	61
74	11	MADAGASCAR	CENTRAL, MTNS.	20.2S	45.2E	50	LO	250	N	N	19910409	122824	245	291	31	61
74	12	MADAGASCAR	ANTANANARIVO AREA	19.1S	47.5E	60	NV	250	N	N	19910409	122838	245	291	30	61
74	13	MADAGASCAR	SO. OF ANTANANARIVO	20.5S	50.9E	90	LO	250	N	N	19910409	122843	245	291	30	61
74	14	MADAGASCAR	CSTL MTNS. NEAR MAHANORO	20.6S	51.4E	90	LO	250	N	N	19910409	122851	245	291	29	61
74	15	MADAGASCAR	CSTL MTNS. NEAR MAHANORO	20.9S	52.2E	90	LO	250	N	N	19910409	122905	245	290	28	61
74	16	REUNION	VRY CLDY OVER ISLAND	21.0S	55.5E	60	LO	250	N	N	19910409	123027	245	289	23	61
74	17	REUNION	VRY CLDY OVER ISLAND	21.0S	55.5E	60	LO	250	N	N	19910409	123032	245	288	23	61
74	18	REUNION	VRY CLDY OVER ISLAND	21.0S	55.5E	60	LO	250	N	N	19910409	123045	245	288	22	61
74	19	REUNION	VRY CLDY OVER ISLAND	21.0S	55.5E	60	LO	250	N	N	19910409	123050	245	288	22	61
74	20	MAURITIUS	VRY CLDY OVER ISLAND	20.5S	57.6E	60	LO	250	N	N	19910409	123115	245	287	20	61
74	21		STORM OVER TEXAS	28.4N	101.5W	100	HO	250	N	N	19910409	132529	244	85	8	62
74	22		STORM OVER TEXAS	28.5N	101.3W	100	HO	250	N	N	19910409	132532	244	86	8	62
74	23		STORM OVER TEXAS	28.5N	101.1W	100	HO	250	N	N	19910409	132535	244	86	8	62
74	24		STORM OVER TEXAS	28.5N	100.2W	100	HO	250	N	N	19910409	132547	245	86	9	62
74	25		STORM OVER TEXAS	28.5N	100.0W	100	HO	250	N	N	19910409	132550	245	86	9	62
74	26		STORM OVER TEXAS	28.5N	99.8W	100	HO	250	N	N	19910409	132553	245	86	9	62
74	27	GULF OF MEXICO	VRY H <sub>2</sub> O <sub>2</sub>	28.5N	95.4W	60	HO	250	N	N	19910409	132658	245	89	14	62
74	28	GULF OF MEXICO		28.5N	94.6W	90	HO	250	N	N	19910409	132709	245	89	14	62
74	29	CUBA	EASTERN CUBA	20.5N	75.5W	60	LO	250	N	N	19910409	133349	245	102	40	62
74	30	CUBA	EASTERN CUBA	20.5N	76.5W	70	LO	250	N	N	19910409	133352	245	102	40	62

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		NADIR		CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN
				LAT	LONG	LAT	LONG										EL
74	31	BAHAMAS	MAYAGUANA IS.	22.5N	73.4W	4.8N	18.8W	50	LO	250	N	N	19910409	133355	245	102	40
74	32	BAHAMAS	MAYAGUANA IS.	22.4N	73.0W	4.8N	18.8W	30	LO	250	N	N	19910409	133357	245	102	40
74	33	BAHAMAS	PROVIDENCIALES	21.9N	72.0W	4.9N	19.0W	60	LO	250	N	N	19910409	133402	245	102	41
74	34	HAITI	NORTHERN PENINSULA	19.7N	73.0W	4.9N	19.1W	30	LO	250	N	N	19910409	133407	245	103	41
74	35	HAITI	OBLIQUE VIEW OF HAITI	19.3N	72.2W	5.0N	19.2W	40	LO	250	N	N	19910409	133411	245	103	41
74	36	DOMINICAN REPUBLIC	SW. CENTRAL	19.0N	71.0W	5.0N	19.3W	40	LO	250	N	N	19910409	133413	245	103	42
74	37	DOMINICAN REPUBLIC	CENTRAL	18.9N	70.3W	5.0N	19.5W	80	LO	250	N	N	19910409	133418	245	103	42
74	38	DOMINICAN REPUBLIC	EASTERN TIP	18.8N	69.8W	5.1N	19.6W	90	LO	250	N	N	19910409	133421	245	103	42
74	39	PUERTO RICO	ISLAND CLOUDY	18.0N	66.5W	6.1N	22.2W	60	LO	250	N	N	19910409	133544	245	105	47
74	40	VIRGIN ISLANDS	VIEQUES TO ANEGADA ISLES	18.4N	65.0W	6.2N	22.4W	50	LO	250	N	N	19910409	133549	245	105	48
74	41	LESSER ANTILLES	ST. MARTIN & ANGUILLA IS.	18.0N	63.0W	6.3N	22.6W	40	LO	250	N	N	19910409	133557	245	106	48
74	42	LESSER ANTILLES	ANTIGUA & BARBUDA IS.	17.6N	61.8W	6.3N	22.8W	50	LO	250	N	N	19910409	133601	245	106	48
74	43	LESSER ANTILLES	ANTIGUA & BARBUDA IS.	17.5N	62.0W	6.5N	23.2W	40	LO	250	N	N	19910409	133616	245	106	49
74	44	SENEGAL	GAMBIA, GUINEA BISSAU			2.6N	17.9W	0	HO	250	N	N	19910409	134825	245	300	83
74	45	GUINEA BISSAU	SENEGAL			2.2N	17.3W	5	HO	250	N	N	19910409	134837	245	300	82
74	46	GUINEA	VRY HIGH OBLIQUE			2.0N	16.9W	5	HO	250	N	N	19910409	134844	245	300	82
74	47	ANGOLA	BENGUELA AREA	12.4S	13.7E	13.4S	10.8E	50	LO	250	N	N	19910409	135725	245	296	48
74	48	ANGOLA	AREA S. OF BENGUELA	12.7S	13.3E	13.5S	10.9E	20	LO	250	N	N	19910409	135727	245	296	48
74	49	ANGOLA	SERRA DA NEVI AREA	13.4S	13.2E	13.6S	11.0E	5	LO	250	N	N	19910409	135730	245	296	48
74	50	ANGOLA	HUILA PLATEAU AREA	14.5S	13.0E	13.6S	11.1E	0	LO	250	N	N	19910409	135732	245	296	48
74	51	ANGOLA	HUILA PLATEAU AREA	14.7S	12.5E	13.7S	11.3E	0	LO	250	N	N	19910409	135734	245	296	48
74	52	ANGOLA	HUILA PLATEAU AREA	15.2S	12.4E	13.7S	11.4E	0	LO	250	N	N	19910409	135736	245	296	48
74	53	ANGOLA	PORTO ALEXANDRE AREA	15.7S	12.2E	13.8S	11.5E	0	LO	250	N	N	19910409	135738	245	296	48
74	54	ANGOLA	DESERT DE MOCAMEDES	16.6S	12.0E	13.9S	11.6E	0	LO	250	N	N	19910409	135741	245	296	47
74	55	NAMIBIA	BORDER WITH ANGOLA	17.6S	12.2E	13.9S	11.8E	0	LO	250	N	N	19910409	135743	245	296	47
74	56	NAMIBIA	BORDER WITH ANGOLA	18.3S	12.3E	14.0S	12.0E	0	LO	250	N	N	19910409	135747	245	296	47
74	57	NAMIBIA	SKELTON COAST	18.7S	12.8E	14.1S	12.1E	0	HO	250	N	N	19910409	135749	245	296	47
74	58	ANGOLA	HUILA PLATEAU			15.5S	15.0E	0	LO	250	N	N	19910409	135841	244	295	43
74	59	ANGOLA	HUILA PLATEAU			15.5S	15.1E	0	LO	250	N	N	19910409	135843	244	295	43
74	60	ANGOLA	NAMIBIA BORDER	17.0S	14.7E	15.6S	15.2E	0	LO	250	N	N	19910409	135845	244	295	43
74	61	ANGOLA	RIO CUENE AREA	16.5S	15.3E	15.6S	15.3E	0	LO	250	N	N	19910409	135847	244	295	43
74	62	NAMIBIA	ETOSHA PAN AREA	17.6S	15.7E	15.7S	15.6E	0	LO	250	N	N	19910409	135851	244	295	43
74	63	NAMIBIA	ETOSHA PAN AREA	17.8S	16.2E	15.8S	15.7E	0	LO	250	N	N	19910409	135853	244	295	43
74	64	ANGOLA				16.7S	17.7E	0	LO	250	N	N	19910409	135928	244	294	40
74	65	BOTSWANA	OKAVANGO DELTA, CUBANGO R	19.0S	21.0E	16.8S	18.0E	0	LO	250	N	N	19910409	135933	244	294	40
74	66	ANGOLA	SE ANGOLA			17.0S	18.4E	5	LO	250	N	N	19910409	135941	244	294	40
74	67	ANGOLA	SE ANGOLA			17.6S	19.8E	5	LO	250	N	N	19910409	140005	244	294	38
74	68	ANGOLA	SE ANGOLA			17.7S	20.1E	0	LO	250	N	N	19910409	140010	244	293	38
74	69	BOTSWANA	OKAVANGO DELTA, SALT PANS	20.0S	23.4E	17.9S	20.4E	0	LO	250	N	N	19910409	140016	244	293	37
74	70	ZIMBABWE	VIEW TOWARDS LAKE KARIBA			18.0S	20.7E	10	HO	250	N	N	19910409	140021	244	293	37

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LAT	LONG LON	NADIR LAT LAT	LONG LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL	OR
74	71	BOTSWANA	MAKGADIKGADI PANS	20.4S	25.5E	18.2S	21.1E	0	LO	250	N	N	19910409	140028	244	293	37	62
74	72	BOTSWANA	MAKGADIKGADI PANS	20.5S	25.3E	18.4S	21.8E	5	LO	250	N	N	19910409	140039	244	293	36	62
74	73	ZAMBIA				18.5S	22.0E	5	LO	250	N	N	19910409	140043	244	293	36	62
74	74	ZAMBIA	RHODESIA AREA, KARIBA LK.			18.7S	22.4E	30	HO	250	N	N	19910409	140049	244	293	35	62
74	75	BOTSWANA	MAKGADIKGADI PANS AREA			18.8S	22.8E	30	HO	250	N	N	19910409	140057	244	293	35	62
74	76	ZAMBIA	RHODESIA AREA			18.9S	23.1E	30	HO	250	N	N	19910409	140101	244	293	34	62
74	77	ZIMBABWE	E. COAST LAKE KARIBA			19.1S	23.5E	60	HO	250	N	N	19910409	140108	244	292	34	62
74	78	BOTSWANA	AREA E. MAKGADIKGADI PANS			19.2S	23.8E	50	HO	250	N	N	19910409	140113	244	292	34	62
74	79	BOTSWANA	MAKGADIKGADI PANS AREA	20.0S	26.0E	19.5S	24.4E	0	LO	250	N	N	19910409	140124	244	292	33	62
74	80	ZIMBABWE	HWANGE NATIONAL PARK AREA	19.0S	27.0E	19.5S	24.6E	0	LO	250	N	N	19910409	140127	244	292	33	62
74	81	ZIMBABWE	LAKE KARIBA AREA	18.0S	28.0E	19.7S	25.0E	0	LO	250	N	N	19910409	140133	244	292	32	62
74	82	ZIMBABWE	SW. ZIMBABWE AREA			19.9S	25.4E	20	LO	250	N	N	19910409	140141	244	292	32	62
74	83	ZAMBIA				19.9S	25.6E	5	LO	250	N	N	19910409	140144	244	292	32	62
74	84	ZAMBIA				20.1S	26.0E	10	LO	250	N	N	19910409	140150	244	292	31	62
74	85	ZAMBIA				20.3S	26.5E	50	LO	250	N	N	19910409	140158	244	291	31	62
74	86	ZAMBIA				20.5S	27.1E	30	LO	250	N	N	19910409	140208	244	291	30	62
74	87	ZIMBABWE				20.6S	27.4E	30	LO	250	N	N	19910409	140214	244	291	30	62
74	88	ZIMBABWE				20.9S	28.3E	30	LO	250	N	N	19910409	140229	244	291	29	62
74	89	ZIMBABWE				21.3S	29.3E	40	LO	250	N	N	19910409	140246	244	290	28	62
74	90	ZIMBABWE	E. END OF LAKE KARIBA	16.3S	29.1E	21.7S	30.4E	30	LO	250	N	N	19910409	140304	244	290	27	62
74	91	ZIMBABWE	MTNS. AREA			22.6S	33.4E	50	LO	250	N	N	19910409	140352	244	289	24	62
74	92	ZIMBABWE	MTNS. AREA			22.7S	33.8E	50	LO	250	N	N	19910409	140358	244	289	23	62
74	93	MOZAMBIQUE	BORDER AREA, ZIMBABWE			23.4S	36.1E	0	LO	250	N	N	19910409	140435	244	288	21	62
74	94	MOZAMBIQUE	BORDER AREA, ZIMBABWE			23.5S	36.4E	5	LO	250	N	N	19910409	140440	244	288	20	62
74	95	MOZAMBIQUE				24.1S	38.4E	0	HO	250	N	N	19910409	140511	244	287	18	62
74	96	MOZAMBIQUE	COASTAL AREA			24.1S	38.6E	0	LO	250	N	N	19910409	140515	244	287	18	62
74	97	MOZAMBIQUE	COASTAL AREA			24.2S	39.0E	0	HO	250	N	N	19910409	140521	244	287	18	62
74	98	REPUBLIC SOUTH AFRICA	NEAR SWAZILAND	28.0S	31.3E	24.5S	39.8E	0	LO	250	N	N	19910409	140534	244	286	17	62
74	99	REPUBLIC SOUTH AFRICA	NEAR SWAZILAND	26.8S	31.5E	24.5S	40.0E	5	LO	250	N	N	19910409	140537	244	286	17	62
74	100	SWAZILAND	REP. S. AFRICA, MOZIAMB	26.5S	31.5E	24.6S	40.5E	5	LO	250	N	N	19910409	140545	244	286	16	62
74	101	USA-CA	MOJAVE DESERT AREA	35.2N	117.8W	28.4N	117.1W	0	LO	250	N	N	19910409	150049	244	89	15	63
74	102	USA-CA	S. END SAN JACQUIN VALLY	35.2N	119.0W	28.4N	116.8W	0	LO	250	N	N	19910409	150054	244	89	15	63
74	103	USA-CA	SIERRA NEVADA MTNS	36.0N	118.2W	28.4N	115.7W	10	LO	250	N	N	19910409	150110	244	90	16	63
74	104	USA-CA	SIERRA NEVADA MTNS			28.4N	115.5W	20	HO	250	N	N	19910409	150113	244	90	17	63
74	105	USA-CA	AREA NW. LOS ANGELES	35.2N	120.0W	28.4N	115.3W	0	LO	250	N	N	19910409	150116	244	90	17	63
74	106	USA-CA	MOJAVE, L.A. AREA	34.5N	118.0W	28.3N	115.1W	0	LO	250	N	N	19910409	150119	244	90	17	63
74	107	USA-CA	LOS ANGELES BASIN	34.2N	116.8W	28.3N	114.9W	0	LO	250	N	N	19910409	150122	244	90	17	63
75	1	ATLANTIC OCEAN	LG STORM, CLOUD FORMATION			28.5N	58.0W	90	HO	250	N	N	19910406	121358	246	101	32	15
75	2	ATLANTIC OCEAN	LG STORM, CLOUD FORMATION			28.5N	58.2W	90	LO	250	N	N	19910406	121409	247	101	33	15
75	3	MAURITANIA	RICHAT, LTD. VIEW OF EARTH			23.8N	21.9W	0	HO	250	N	N	19910406	122312	246	134	66	15

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	NADIR LAT	CC	TL	FL	E	S	DATE	GMT	AL	SUN AZ	EL	OR
75	4	MALI	NIGER R., LTD VIEW EARTH	22.9N	19.0W	0	H0	250	N	N	19910406	122359	245	139	68	15
75	5	TANZANIA	S. SHORE LAKE VICTORIA	2.2S	32.0E	70	L0	250	N	N	19910406	123901	243	281	49	15
75	6	TANZANIA	S. SHORE LAKE VICTORIA	1.5S	32.2E	80	L0	250	N	N	19910406	123904	243	281	48	15
75	7	TANZANIA	S. SHORE LAKE VICTORIA	1.7S	31.4E	80	L0	250	N	N	19910406	123906	243	281	48	15
75	8	TANZANIA	S. SHORE LAKE VICTORIA	1.5S	33.1E	80	L0	250	N	N	19910406	123909	243	281	48	15
75	9	TANZANIA	S. SHORE LAKE VICTORIA	1.6S	33.0E	70	L0	250	N	N	19910406	123912	243	281	48	15
75	10	TANZANIA	S. SHORE LAKE VICTORIA	2.0S	33.0E	70	L0	250	N	N	19910406	123915	243	281	48	15
75	11	TANZANIA	LK. NATRON	2.5S	35.4E	80	L0	250	N	N	19910406	123929	242	282	47	15
75	12	TANZANIA	LK. NATRON	2.4S	35.4E	80	L0	250	N	N	19910406	123934	242	282	47	15
75	13	TANZANIA	LK. NATRON	2.4S	36.0E	70	L0	250	N	N	19910406	123944	242	282	46	15
75	14	TANZANIA	C. RIFT, LK. MANYARA	3.2S	36.0E	70	L0	250	N	N	19910406	123958	242	282	45	15
75	15	TANZANIA	C. RIFT, LK. MANYARA	3.8S	35.8E	80	L0	250	N	N	19910406	124001	242	282	45	15
75	16	TANZANIA	C. RIFT, LKS MANYARA, NTRN	3.1S	36.0E	80	L0	250	N	N	19910406	124004	242	282	45	15
75	17	TANZANIA	C. RIFT, LKS MANYARA, NTRN	3.1S	36.0E	80	L0	250	N	N	19910406	124012	242	282	44	15
75	18	TANZANIA	C. RIFT, LK. NATRON	2.3S	36.0E	70	L0	250	N	N	19910406	124022	242	282	44	15
75	19	TANZANIA	C. RIFT, LK. NATRON	2.5S	36.5E	70	L0	250	N	N	19910406	124025	242	282	43	15
75	20	TANZANIA	C. RIFT AREA, E. OF NATRON	4.4S	36.0E	80	L0	250	N	N	19910406	124034	242	283	43	15
75	21	TANZANIA	C. RIFT AREA, E. OF NATRON	4.6S	36.4E	80	L0	250	N	N	19910406	124041	242	283	42	15
75	22	TANZANIA	C. RIFT AREA, LK. NATRON	4.7S	36.6E	70	L0	250	N	N	19910406	124045	242	283	42	15
75	23	TANZANIA	C. RIFT AREA, E. OF NATRON	4.8S	36.9E	70	L0	250	N	N	19910406	124050	242	283	42	15
75	24	TANZANIA	TANGA AREA, COAST	4.9S	37.0E	80	L0	250	N	N	19910406	124053	242	283	42	15
75	25	TANZANIA	TANGA AREA, COAST, KENYA	5.0S	37.2E	80	L0	250	N	N	19910406	124056	242	283	41	15
75	26	KENYA	COAST	5.1S	37.3E	70	L0	250	N	N	19910406	124058	242	283	41	15
75	27	TANZANIA	LAKE NATRON	2.7S	36.5E	50	L0	250	N	N	19910406	124105	242	283	41	15
75	28	TANZANIA	ZANZIBAR ISLAND	6.3S	39.3E	50	L0	250	N	N	19910406	124136	242	283	39	15
75	29	TANZANIA	ZANZIBAR, PENBA ISLANDS	5.8S	39.4E	50	L0	250	N	N	19910406	124139	242	283	39	15
75	30	TANZANIA	COAST, KENYA	6.6S	39.9E	50	L0	250	N	N	19910406	124147	242	283	38	15
75	31	TANZANIA	VERY CLOUDY	8.3S	42.9E	70	L0	250	N	N	19910406	124244	242	283	35	15
75	32	TANZANIA	MAFIA ISLAND, SUN GLINT	8.0S	39.8E	60	L0	250	N	N	19910406	124247	242	283	35	15
75	33	MOZAMBIQUE	HIGH OBLIQUE, VRY CLOUDY	8.7S	43.8E	95	H0	250	N	N	19910406	124301	242	283	34	15
75	34	MOZAMBIQUE	HIGH OBLIQUE, VRY CLOUDY	9.0S	44.3E	95	H0	250	N	N	19910406	124311	242	283	33	15
75	35	MADAGASCAR	STORM CLOUD, N. END IS.	10.6S	47.3E	95	H0	250	N	N	19910406	124406	242	283	30	15
75	36	MADAGASCAR	STORM CLOUD, N. END IS.	11.0S	48.1E	95	H0	250	N	N	19910406	124420	242	283	29	15
75	37	MADAGASCAR	STORM CLOUD, N. END IS.	11.4S	48.7E	95	H0	250	N	N	19910406	124432	242	283	28	15
75	38	MADAGASCAR	STORM CLOUD, N. END IS.	11.5S	49.0E	95	H0	250	N	N	19910406	124437	242	283	27	15
75	39	MADAGASCAR	STORM CLOUD, N. END IS.	12.2S	49.2E	80	L0	250	N	N	19910406	124446	242	283	27	15
75	40	MEXICO	LAKE CHAPALA, SMOKE PLUMS	26.1N	103.3W	60	L0	250	N	N	19910406	134220	246	89	13	16
75	41	MEXICO	LAKE CHAPALA, SMOKE PLUMS	26.3N	102.5W	80	H0	250	N	N	19910406	134233	246	89	14	16
75	42	USA-FL	CENTRAL FL., CLDY, HAZEY	28.5N	81.5W	77.1W	80	L0	250	N	19910406	134848	247	104	37	16
75	43	USA-FL	CENTRAL FL., CLDY, HAZEY	28.5N	81.5W	76.4W	80	L0	250	N	19910406	134858	247	105	38	16

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
75	44	USA-FL	CENTRAL FL.,CLDY,HAZEY	28.4N	74.9W	90	HO	250	N	N	19910406	134919	246	106	39	16
75	45	USA-FL	CENTRAL FL.,CLDY,HAZEY	28.3N	72.5W	90	HO	250	N	N	19910406	134954	246	107	41	16
75	46	DOMINICAN REPUBLIC	HISPANIOLA,VRY HI OBLIQ	27.5N	64.1W	80	HO	250	N	N	19910406	135158	246	114	49	16
75	47	DOMINICAN REPUBLIC	HISPANIOLA,VRY HI OBLIQ	27.4N	63.3W	80	HO	250	N	N	19910406	135210	246	114	50	16
75	48	ANGOLA	VIEW ALONG SW COAST AFRC	6.3S	15.5E	90	HO	250	N	N	19910406	141504	242	283	39	16
75	49	ANGOLA	VIEW ALONG SW COAST AFRC	6.6S	16.0E	90	HO	250	N	N	19910406	141513	242	283	39	16
75	50	ANGOLA	VRY CLDY	6.8S	16.5E	95	LO	250	N	N	19910406	141522	242	283	38	16
75	51	ANGOLA	VRY CLDY	8.6S	19.6E	95	LO	250	N	N	19910406	141621	242	284	35	16
75	52	ZAMBIA	CLDY,HOLES OVER RIVERS	9.6S	21.6E	90	HO	250	N	N	19910406	141657	242	284	32	16
75	53	ZAMBIA	CLDY,HOLES OVER RIVERS	10.1S	22.5E	90	HO	250	N	N	19910406	141715	242	284	31	16
75	54	ZAMBIA	CLDY,HOLES OVER RIVERS	10.5S	23.3E	90	LO	250	N	N	19910406	141729	242	284	30	16
75	55	ZAMBIA	LAKE KARIBA	17.2S	27.6E	70	LO	250	N	N	19910406	141822	242	283	27	16
75	56	ZAMBIA	LUKANGA SWAMP	12.4S	26.9E	70	LO	250	N	N	19910406	141835	242	283	26	16
75	57	ZIMBABWE	LAKE KARIBA	18.0S	29.0E	60	LO	250	N	N	19910406	141909	242	283	24	16
75	58	MOZAMBIQUE	ZAMBESI R.,MEGA FAN	13.7S	29.4E	60	HO	250	N	N	19910406	141921	242	283	23	16
75	59	MOZAMBIQUE	ZAMBESI R.,MEGA FAN	13.8S	29.8E	60	HO	250	N	N	19910406	141927	242	283	23	16
75	60	MOZAMBIQUE	ZAMBESI R.,MEGA FAN	14.1S	30.3E	60	HO	250	N	N	19910406	141936	242	283	22	16
75	61	MOZAMBIQUE	ZAMBESI R.,MEGA FAN	14.8S	31.8E	60	LO	250	N	N	19910406	142003	242	283	21	16
75	62	ZIMBABWE	LUNDI,SABI,& SAVE RIVERS	14.9S	32.1E	40	LO	250	N	N	19910406	142008	242	282	20	16
75	63	MOZAMBIQUE		15.4S	33.0E	60	LO	250	N	N	19910406	142024	242	282	19	16
75	64	MOZAMBIQUE	COAST	15.7S	33.7E	50	HO	250	N	N	19910406	142038	242	282	18	16
75	65	MOZAMBIQUE	COAST,SAVE & PUNGOE RVS.	20.2S	34.2E	0	LO	250	N	N	19910406	142046	242	282	18	16
75	66	MOZAMBIQUE	COAST,MEGA FANS	21.2S	35.5E	0	LO	250	N	N	19910406	142112	242	282	16	16
75	67	MOZAMBIQUE	PUNGOE RV. DELTA	20.0S	36.0E	0	LO	250	N	N	19910406	142138	242	281	15	16
75	68		ORB.TAIL,CLOUDS	18.3S	39.6E	100	HO	250	N	N	19910406	142219	242	281	12	16
75	69		ORB.TAIL,CLOUDS	18.4S	39.9E	100	HO	250	N	N	19910406	142225	242	281	12	16
75	70	USA-CA	SALTON SEA AREA	27.8N	116.5W	60	HO	250	N	N	19910406	151826	246	94	22	17
75	71	USA-CA	SALTON SEA AREA	27.9N	115.7W	40	HO	250	N	N	19910406	151838	246	95	23	17
75	72	MEXICO	BAJA CALIFORNIA	28.3N	109.8W	40	HO	250	N	N	19910406	152005	246	98	29	17
75	73	MEXICO	WEST OF CHIHUAHUA	28.4N	108.4W	0	LO	250	N	N	19910406	152025	246	99	30	17
75	74	MEXICO	WEST OF CHIHUAHUA	28.4N	107.7W	10	HO	250	N	N	19910406	152035	246	100	30	17
75	75	MEXICO	WEST OF CHIHUAHUA	28.5N	107.0W	0	LO	250	N	N	19910406	152045	246	100	31	17
75	76	MEXICO	NW MEXICO	28.5N	106.5W	20	HO	250	N	N	19910406	152053	246	100	32	17
75	77	MEXICO	ORB.TAIL,BAJA CALIFORNIA	28.5N	105.7W	30	HO	250	N	N	19910406	152104	246	101	32	17
75	78	MEXICO	ORB.TAIL,BAJA CALIFORNIA	28.5N	104.2W	20	HO	250	N	N	19910406	152126	246	102	34	17
75	79	USA-TX	AMISTAD RES.,VRY CLDY	29.5N	101.0W	90	LO	250	N	N	19910406	152237	246	105	38	17
75	80	NAMIBIA	HAZY,OVER EXPOSED	14.4S	7.0E	70	HO	250	N	N	19910406	155313	243	283	22	17
75	81	NAMIBIA	ETOSHA PAN AREA	18.8S	16.5E	60	LO	250	N	N	19910406	155500	243	282	15	17
75	82	NAMIBIA	ETOSHA PAN AREA	18.8S	16.5E	60	LO	250	N	N	19910406	155505	243	282	15	17
75	83	NAMIBIA	CLDY, HAZY	18.4S	16.0E	60	LO	250	N	N	19910406	155550	243	281	12	17

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	NADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL	OR
75	84	NAMIBIA	CLDY, HAZY		18.8S 17.1E	60	LO	250	N	N	19910408	155609	243	280	11	17
75	85	PACIFIC OCEAN	CLDS. N. OF HAWAII IS.		25.1N 155.7W	80	LO	250	N	N	19910408	164801	246	86	7	18
75	86	PACIFIC OCEAN	CLDS. N. OF HAWAII IS.		25.2N 155.3W	80	LO	250	N	N	19910408	164808	246	86	8	18
75	87	PACIFIC OCEAN	CLDS. N. OF HAWAII IS.		25.4N 154.4W	80	LO	250	N	N	19910408	164822	246	87	9	18
75	88	MEXICO	IS.WAKES, BAJA CALIF.		28.4N 122.4W	80	LO	250	N	N	19910408	165616	246	105	38	18
75	89	PACIFIC OCEAN	CLOUDS & WATER		28.2N 118.4W	60	LO	250	N	N	19910408	165714	246	108	42	18
75	90	MEXICO	BAJA CA., VIZCAINO DESERT	28.0N 113.0W	28.1N 116.9W	20	LO	250	N	N	19910408	165735	246	109	43	18
75	91	MEXICO	YUCATAN, NE TIP	20.0N 86.0W	21.0N 84.8W	70	LO	250	N	N	19910408	170552	245	147	73	18
75	92	VENEZUELA	ISLA DE MARGARITA	11.0N 64.0W	11.2N 63.0W	80	LO	250	N	N	19910408	171213	244	252	74	18
75	93	VENEZUELA	ORINOCO RIVER DELTA		10.6N 61.8W	95	LO	250	N	N	19910408	171235	244	256	73	18
75	94	VENEZUELA	ORINOCO RIVER DELTA		10.4N 61.4W	95	LO	250	N	N	19910408	171242	244	257	73	18
75	95	VENEZUELA	ORINOCO RIVER DELTA	10.0N 62.5W	10.3N 61.2W	90	LO	250	N	N	19910408	171247	244	258	73	18
75	96	VENEZUELA	ORINOCO RIVER DELTA	10.0N 62.5W	10.0N 60.6W	90	LO	250	N	N	19910408	171257	244	259	72	18
75	97	VENEZUELA	ORINOCO RIVER DELTA	9.0N 59.7W	8.8N 58.5W	60	LO	250	N	N	19910408	171336	244	264	70	18
75	98	GUYANA	COAST, BDR. SURINAM	7.0N 56.5W	8.5N 57.9W	60	LO	250	N	N	19910408	171347	244	265	70	18
75	99	SURINAM	PARAMARIBO AREA	7.0N 55.0W	7.6N 56.3W	60	LO	250	N	N	19910408	171418	244	268	68	18
75	100	SURINAM	PARAMARIBO AREA	7.0N 55.0W	6.7N 54.7W	60	LO	250	N	N	19910408	171447	243	270	66	18
75	101	SURINAM	PARAMARIBO AREA	4.6N 55.0W	6.5N 54.3W	95	LO	250	N	N	19910408	171456	243	271	66	18
75	102	FRENCH GUIANA	KOUROU AREA, COAST	6.0N 52.3W	5.5N 52.5W	60	LO	250	N	N	19910408	171530	243	273	64	18
75	103	FRENCH GUIANA	BORDER WITH BRAZIL	5.2N 51.8W	5.2N 52.1W	70	LO	250	N	N	19910408	171537	243	273	63	18
75	104	BRAZIL	MOUTH AMAZON RIVER	2.0N 49.5W	3.9N 49.8W	90	LO	250	N	N	19910408	171620	243	276	61	18
76	1	USA			25.7N 95.2W	50	HO	250	N	N	19910409	150615	245	102	39	63
76	2	USA-FL	AREA E. OF PANAMA CITY	30.0N 85.0W	6.1N 44.7W	50	LO	250	N	N	19910409	150729	245	104	44	63
76	3	USA-FL	CENTRAL FL., VRY CLDY	28.5N 81.5W	5.4N 43.4W	90	LO	250	N	N	19910409	150808	245	105	46	63
76	4	USA-FL	CENTRAL FL., VRY CLDY		4.9N 42.6W	90	LO	250	N	N	19910409	150853	245	106	49	63
76	5	BAHAMAS	ANDROS ISLAND	24.3N 77.8W	4.8N 42.5W	70	LO	250	N	N	19910409	150917	245	107	51	63
76	6	BAHAMAS	ANDROS ISLAND	24.3N 77.8W	4.8N 42.5W	70	LO	250	N	N	19910409	150932	245	107	52	63
76	7	BAHAMAS	TONGUE OF OCEAN AREA	24.2N 75.4W	4.8N 42.6W	60	LO	250	N	N	19910409	150945	245	107	53	63
76	8	BAHAMAS	TONGUE OF OCEAN AREA	24.7N 75.8W	4.8N 42.7W	70	LO	250	N	N	19910409	150957	245	107	53	63
76	9	BAHAMAS	CAT ISLAND	24.4N 75.5W	5.8N 45.4W	60	LO	250	N	N	19910409	151159	245	110	61	63
76	10	BAHAMAS	CROOKED & ACKLINS IS.	22.8N 73.8W	6.0N 45.7W	60	LO	250	N	N	19910409	151210	245	110	62	63
76	11	BAHAMAS	ACKLINS ISLAND	23.0N 73.5W	6.1N 46.0W	60	LO	250	N	N	19910409	151217	245	110	62	63
76	12	BAHAMAS	MAYAGUANA IS.	22.6N 72.8W	6.2N 46.1W	60	LO	250	N	N	19910409	151222	244	110	63	63
76	13	HAITI	MASSIF DU SUD	18.3N 74.0W	6.7N 47.3W	60	LO	250	N	N	19910409	151300	244	111	65	63
76	14	HAITI	MASSIF DU SUD	18.3N 73.3W	6.7N 47.4W	60	LO	250	N	N	19910409	151303	244	111	65	63
76	15	HAITI	PORT AU PRINCE AREA	18.3N 72.3W	6.8N 47.5W	30	LO	250	N	N	19910409	151305	244	111	65	63
76	16	HAITI	PORT AU PRINCE AREA	18.3N 72.0W	6.8N 47.5W	30	LO	250	N	N	19910409	151307	244	111	66	63
76	17	HAITI	PORT AU PRINCE AREA	18.7N 72.8W	6.8N 47.6W	30	LO	250	N	N	19910409	151310	244	111	66	63
76	18	HAITI	PORT AU PRINCE AREA	19.0N 72.3W	6.9N 47.7W	20	LO	250	N	N	19910409	151313	244	111	66	63
76	19	DOMINICAN REPUBLIC	SIERRA DE BAORUCO	18.0N 71.5W	6.9N 47.9W	20	LO	250	N	N	19910409	151317	244	111	66	63



TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		MADIR		CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN	EL	OR
				LAT	LONG	LAT	LONG												
76	20	DOMINICAN REPUBLIC	RIFT AREA, BARAHONA	18.2N	71.2W	7.0N	48.0W	10	LO	250	N	N	19910409	151320	244	111	66	63	
76	21	DOMINICAN REPUBLIC	RIFT AREA, BARAHONA	18.2N	70.8W	7.0N	48.0W	10	LO	250	N	N	19910409	151322	244	111	67	63	
76	22	DOMINICAN REPUBLIC	CORDILLERA CENTRAL	18.8N	71.2W	7.0N	48.1W	20	LO	250	N	N	19910409	151325	244	111	67	63	
76	23	DOMINICAN REPUBLIC	RIFT VALLEY	18.8N	71.7W	7.1N	48.2W	20	LO	250	N	N	19910409	151328	244	111	67	63	
76	24	HAITI	NORTH CENTRAL AREA	19.2N	72.1W	7.1N	48.3W	20	LO	250	N	N	19910409	151332	244	112	67	63	
76	25	HAITI	NORTHWEST AREA	19.5N	72.5W	7.2N	48.5W	20	LO	250	N	N	19910409	151337	244	112	68	63	
76	26	HAITI	NORTHWEST AREA	19.3N	72.2W	7.3N	48.6W	20	LO	250	N	N	19910409	151340	244	112	68	63	
76	27	HAITI	NORTHEAST AREA	19.3N	71.9W	7.3N	48.7W	30	LO	250	N	N	19910409	151343	244	112	68	63	
76	28	DOMINICAN REPUBLIC	NORTHWEST AREA	19.4N	71.5W	7.3N	48.8W	30	LO	250	N	N	19910409	151346	244	112	68	63	
76	29	DOMINICAN REPUBLIC	CENTRAL AREA	19.0N	70.7W	7.4N	48.8W	60	LO	250	N	N	19910409	151348	244	112	68	63	
76	30	DOMINICAN REPUBLIC	EASTERN TIP	18.6N	69.0W	7.6N	49.4W	60	LO	250	N	N	19910409	151406	244	112	69	63	
76	31	DOMINICAN REPUBLIC	EASTERN TIP	18.6N	69.4W	7.7N	49.5W	60	LO	250	N	N	19910409	151411	244	112	70	63	
76	32	DOMINICAN REPUBLIC	EASTERN TIP	18.6N	69.8W	7.8N	49.7W	70	LO	250	N	N	19910409	151418	244	112	70	63	
76	33	DOMINICAN REPUBLIC	EASTERN TIP	18.8N	69.8W	7.8N	49.9W	70	LO	250	N	N	19910409	151424	244	112	71	63	
76	34	DOMINICAN REPUBLIC	EASTERN TIP	18.0N	68.0W	7.9N	50.1W	60	LO	250	N	N	19910409	151431	244	112	71	63	
76	35	PUERTO RICO	MONA PASSAGE	18.0N	67.7W	8.1N	50.5W	50	LO	250	N	N	19910409	151446	244	112	72	63	
76	36	PUERTO RICO	WESTERN 2/3 ISLAND	18.2N	66.8W	8.1N	50.5W	50	LO	250	N	N	19910409	151449	244	112	72	63	
76	37	PUERTO RICO		18.0N	66.4W	8.2N	50.6W	50	LO	250	N	N	19910409	151452	244	113	72	63	
76	38	PUERTO RICO	EASTERN HALF IS.	18.2N	65.8W	8.2N	50.7W	50	LO	250	N	N	19910409	151457	244	113	73	63	
76	39	VIRGIN ISLANDS	ST THOMAS & JOHN ISLANDS	18.4N	64.9W	8.4N	51.0W	60	LO	250	N	N	19910409	151508	244	113	73	63	
76	40	VIRGIN ISLANDS	ST THOMAS & JOHN ISLANDS	18.4N	64.8W	8.4N	51.2W	50	LO	250	N	N	19910409	151517	244	113	74	63	
76	41	VIRGIN ISLANDS	ST THOMAS & JOHN ISLANDS	18.3N	64.8W	8.5N	51.4W	50	LO	250	N	N	19910409	151528	244	113	75	63	
76	42	LESSER ANTILLES	ST VINCENT	13.2N	61.2W	8.7N	51.8W	30	NV	250	N	N	19910409	151549	244	113	76	63	
76	43	LESSER ANTILLES	ST LUCIA	13.7N	60.9W	8.7N	51.8W	40	LO	250	N	N	19910409	151552	244	113	76	63	
76	44	LESSER ANTILLES	MARTINIQUE, CLDY OVR ISL.	14.5N	61.0W	8.8N	51.9W	40	LO	250	N	N	19910409	151600	244	113	77	63	
76	45	LESSER ANTILLES	ST. CHRISTOPHER, NEVI IS.	17.1N	62.6W	8.8N	52.0W	50	LO	250	N	N	19910409	151606	244	113	77	63	
76	46	LESSER ANTILLES	BARBUDA, ANTIQUA IS.	17.1N	61.9W	8.8N	52.1W	50	LO	250	N	N	19910409	151611	244	113	77	63	
76	47	LESSER ANTILLES	BARBADOS	13.2N	59.8W	8.9N	52.3W	60	LO	250	N	N	19910409	151635	244	113	79	63	
76	48	NAMIBIA	BRANDBERG AREA	21.5S	15.0E	23.3S	11.6E	0	LO	250	N	N	19910409	153745	245	287	19	63	
76	49	NAMIBIA	BORDER WITH REP. S. AFRIA	23.7S	15.0E	24.0S	14.0E	0	LO	250	N	N	19910409	153824	245	286	16	63	
76	50	NAMIBIA	NAMIB DESERT	24.6S	15.5E	24.1S	14.4E	0	LO	250	N	N	19910409	153830	245	286	16	63	
76	51	NAMIBIA	NAMIB DESERT	24.8S	15.8E	24.2S	14.9E	0	LO	250	N	N	19910409	153838	245	286	15	63	
76	52	NAMIBIA	NAMIB DESERT	25.2S	16.0E	24.2S	15.1E	0	LO	250	N	N	19910409	153841	245	285	15	63	
76	53	NAMIBIA	NAMIB DESERT	25.5S	16.0E	24.3S	15.4E	0	LO	250	N	N	19910409	153845	245	285	15	63	
76	54	NAMIBIA	NAMIB DESERT	25.5S	15.5E	24.4S	15.6E	0	LO	250	N	N	19910409	153849	245	285	15	63	
76	55	NAMIBIA	NAMIB DESERT	26.0S	15.5E	24.4S	15.8E	0	LO	250	N	N	19910409	153852	245	285	14	63	
76	56	NAMIBIA	NAMIB DESERT	26.1S	16.0E	24.5S	16.0E	0	LO	250	N	N	19910409	153855	245	285	14	63	
76	57	NAMIBIA	RUGGED MTNS E. NAMIB DSRT	25.5S	16.5E	24.5S	16.2E	0	LO	250	N	N	19910409	153858	245	285	14	63	
76	58	NAMIBIA	RUGGED MTNS E. NAMIB DSRT	25.8S	16.8E	24.6S	16.4E	0	LO	250	N	N	19910409	153902	245	285	14	63	
76	59	NAMIBIA	RUGGED MTNS E. NAMIB DSRT	25.6S	16.4E	24.6S	16.6E	0	LO	250	N	N	19910409	153904	245	285	14	63	

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	LONG	MADIR LAT	LONG	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
76	60	NAMIBIA	RUGGED MTNS E. NAMIB	26.5S	17.0E	24.7S	16.8E	0	LO	250	N	N	19910409	153907	245	285	13	63
76	61	NAMIBIA	LARGE AREA SALT FLATS	25.0S	17.0E	24.8S	17.3E	0	LO	250	N	N	19910409	153915	245	285	13	63
76	62	NAMIBIA	RUGGED HILLS	24.0S	16.0E	25.0S	17.9E	0	LO	250	N	N	19910409	153925	245	284	12	63
76	63	NAMIBIA	NAUKLUFBERGE	24.2S	16.2E	25.2S	18.8E	0	LO	250	N	N	19910409	153939	245	284	11	63
76	64	NAMIBIA	LEWERRIVIER, W. EDGE KALAH	25.1S	17.8E	25.2S	19.1E	0	LO	250	N	N	19910409	153944	245	284	11	63
76	65	NAMIBIA	MARIENTAL AREA	24.9S	18.1E	25.3S	19.5E	0	LO	250	N	N	19910409	153950	245	283	11	63
76	66	NAMIBIA	AREA NNW OF KEETMANSHOOP	26.2S	18.0E	25.4S	19.7E	0	LO	250	N	N	19910409	153953	245	283	10	63
76	67	NAMIBIA	AREA N OF KEETMANSHOOP	26.2S	18.2E	25.4S	19.9E	0	LO	250	N	N	19910409	153955	245	283	10	63
76	68	NAMIBIA	AREA S. OF KEETMANSHOOP	27.3S	18.5E	25.5S	20.1E	0	LO	250	N	N	19910409	153959	245	283	10	63
76	69	NAMIBIA	HAKSKEEN PAN AREA	27.2S	20.3E	25.6S	20.6E	0	OO	250	N	N	19910409	154007	245	283	10	63
76	70	REPUBLIC SOUTH AFRICA	S. KALAHARI DESERT	27.5S	20.8E	25.6S	21.0E	0	LO	250	N	N	19910409	154012	245	283	9	63
76	71	REPUBLIC SOUTH AFRICA	MOLOPO RIVER	26.6S	22.1E	25.7S	21.4E	0	LO	250	N	N	19910409	154018	245	283	9	63
76	72	REPUBLIC SOUTH AFRICA	JUNCTION NOSSOB, MOLOPO R	26.8S	20.9E	25.9S	22.1E	0	LO	250	N	N	19910409	154030	245	282	8	63
76	73	REPUBLIC SOUTH AFRICA				26.0S	22.6E	0	LO	250	N	N	19910409	154037	245	282	8	63
76	74	REPUBLIC SOUTH AFRICA				26.0S	22.7E	0	LO	250	N	N	19910409	154039	245	282	8	63
76	75	REPUBLIC SOUTH AFRICA				26.1S	22.9E	0	LO	250	N	N	19910409	154042	245	282	7	63
76	76	REPUBLIC SOUTH AFRICA				26.1S	23.1E	0	LO	250	N	N	19910409	154045	245	282	7	63
76	77	MEXICO	SMOKE VALLEYS S. MEXICO			17.6N	94.4W	50	LO	250	N	N	19910409	164622	245	110	64	64
76	78	MEXICO	PRESA DE LA ANGOSTURA	6.2N	92.0W	17.4N	94.0W	30	LO	250	N	N	19910409	164630	245	111	65	64
76	79	NICARAGUA	MANAGUA AREA, HAZY	12.2N	86.3W	16.0N	90.8W	70	LO	250	N	N	19910409	164726	245	111	69	64
76	80	NICARAGUA	HONDURAS BORDER			15.6N	90.0W	95	LO	250	N	N	19910409	164740	245	111	69	64
76	81	CARIBBEAN SEA	UNIDENTIFIED CAYS			13.6N	86.2W	40	LO	250	N	N	19910409	164847	245	112	74	64
76	82	BRAZIL	AREA NEAR SALVADOR			12.8S	38.2W	80	LO	250	N	N	19910409	170350	245	296	47	64
76	83	BRAZIL	AREA NEAR SALVADOR			13.3S	37.1W	95	LO	250	N	N	19910409	170409	245	296	46	64
76	84	BRAZIL	NEAR SALVADOR, COAST			13.8S	36.1W	70	LO	250	N	N	19910409	170427	245	296	45	64
76	85	BRAZIL	NEAR SALVADOR, COAST			13.8S	35.9W	95	LO	250	N	N	19910409	170430	245	296	45	64
76	86	ECUADOR	COAST, S OF MANTA	2.2S	80.4W	1.3S	82.8W	90	LO	250	N	N	19910409	183046	245	301	73	65
76	87	ECUADOR	NEAR MANTA			1.4S	82.6W	95	LO	250	N	N	19910409	183050	245	301	73	65
76	88	PERU	HIGH OBLIQUE, W. COAST			1.9S	81.8W	80	HO	250	N	N	19910409	183106	245	301	71	65
76	89	ECUADOR	NEAR MANTA, COAST			2.5S	80.9W	70	LO	250	N	N	19910409	183123	245	301	70	65
76	90	ECUADOR	PUNTA SANTA ELENA AREA	2.2S	80.4W	2.6S	80.7W	70	LO	250	N	N	19910409	183127	245	301	70	65
76	91	PERU	COAST, NEAR TUMBES			2.7S	80.4W	70	LO	250	N	N	19910409	183132	245	301	70	65
76	92	PERU	SECHURA DESERT	4.8S	81.0W	2.8S	80.1W	30	LO	250	N	N	19910409	183137	245	301	70	65
76	93	PERU	SECHURA DESERT	5.2S	80.8W	3.0S	80.0W	20	LO	250	N	N	19910409	183140	245	301	69	65
76	94	PERU	SECHURA DESERT	5.5S	80.8W	3.0S	79.9W	10	LO	250	N	N	19910409	183142	245	301	69	65
77	1	SOMALIA	CENTRAL COAST			3.0N	47.4E	30	LO	250	N	N	19910406	110308	243	277	57	14
77	2	SOMALIA	CENTRAL COAST			2.9N	47.5E	LO	250	N	N	N	19910406	110311	243	277	57	14
77	3	SOMALIA	CENTRAL COAST			2.8N	47.6E	LO	250	N	N	N	19910406	110313	243	277	57	14
77	4	SOMALIA	CENTRAL COAST			2.7N	47.8E	LO	250	N	N	N	19910406	110317	243	277	56	14
77	5	SOMALIA	CENTRAL COAST			2.6N	48.0E	20	LO	250	N	N	19910406	110320	243	277	56	14

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		MADIR		CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN
				LAT	LONG	LAT	LONG										EL OR
77	6	SOMALIA	CENTRAL COAST	2.3N	48.4E	2.3N	48.4E	20	LO	250	N	N	19910406	110328	243	277	56 14
77	7		CARGO BAY	26.9N	75.0W	26.9N	75.0W	LO	500	N	N	N	19910406	121001	246	91	17 15
77	8		CARGO BAY	27.1N	73.8W	27.1N	73.8W	LO	50	N	N	N	19910406	121022	246	92	19 15
77	9		CARGO BAY	27.3N	72.2W	27.3N	72.2W	LO	50	N	N	N	19910406	121043	246	93	20 15
77	10	MAURITANIA	BAIE DU LEVRIER AREA	21.0N	16.8W	21.0N	16.8W	5	LO	250	N	N	19910406	122434	245	143	70 15
77	11	MAURITANIA	RICHAT STRUCTURE	21.8N	12.3W	21.3N	14.0W	0	LO	250	N	N	19910406	122520	245	150	73 15
77	12	MAURITANIA	RICHAT STRUCTURE	21.8N	12.3W	21.0N	13.2W	0	LO	250	N	N	19910406	122534	245	152	73 15
77	13	MAURITANIA	DESERT	19.0N	7.9W	19.0N	7.9W	0	LO	250	N	N	19910406	122702	245	171	77 15
77	14	MALI	NIGER RIVER	17.3N	3.9W	17.3N	3.9W	0	LO	250	N	N	19910406	122810	244	192	78 15
77	15	MALI	INLAND DELTA AREA	4.0N	16.5W	17.0N	3.3W	0	LO	250	N	N	19910406	122822	244	198	78 15
77	16	MALI	NIGER RIVER AREA	17.0N	1.5W	16.6N	2.4W	0	LO	250	N	N	19910406	122837	244	201	79 15
77	17	MALI	SE. MALI	16.0N	1.0W	16.0N	1.0W	0	LO	250	N	N	19910406	122902	244	210	78 15
77	18	NIGER	DALLOL BOSSO AREA	13.8N	3.0E	15.0N	1.1E	10	LO	250	N	N	19910406	122938	244	222	78 15
77	19	NIGERIA	KAINJI LAKE AREA	10.7N	4.5E	14.7N	1.8E	80	LO	250	N	N	19910406	122951	244	226	78 15
77	20	NIGERIA	SOKOTO AREA	13.0N	5.0E	13.4N	4.4E	0	LO	250	N	N	19910406	123037	244	238	76 15
77	21	NIGERIA	NIGER BORDER AREA	13.0N	5.2E	13.0N	5.2E	0	LO	250	N	N	19910406	123053	244	242	76 15
77	22	NIGERIA	NIGER BORDER AREA	12.4N	6.4E	12.4N	6.4E	0	LO	250	N	N	19910406	123114	244	246	75 15
77	23	NIGERIA	LARGE RESERVOIR, UNMAPPED	10.1N	10.7E	10.1N	10.7E	40	LO	250	N	N	19910406	123233	244	259	71 15
77	24	NIGERIA	LARGE RESERVOIR, UNMAPPED	9.6N	11.7E	9.6N	11.7E	40	LO	250	N	N	19910406	123252	243	261	70 15
77	25	CHAD	LAKE CHAD AREA	13.0N	14.5E	8.2N	14.3E	40	LO	250	N	N	19910406	123341	243	266	68 15
77	26	CHAD	LAKE CHAD AREA	13.2N	14.5E	7.8N	14.9E	40	LO	250	N	N	19910406	123352	243	267	67 15
77	27	CENTRAL AFRICAN REP.	BORDER AREA WITH ZAIRE	5.0N	20.0E	5.9N	18.4E	50	NV	250	N	N	19910406	123458	243	272	63 15
77	28	CENTRAL AFRICAN REP.	BORDER AREA WITH ZAIRE	5.0N	20.5E	5.4N	19.2E	50	NV	250	N	N	19910406	123513	243	273	62 15
77	29	CENTRAL AFRICAN REP.	BORDER AREA WITH ZAIRE	5.1N	19.8E	5.1N	19.8E	40	LO	250	N	N	19910406	123524	243	273	62 15
77	30	CENTRAL AFRICAN REP.	BORDER AREA WITH ZAIRE	4.9N	20.1E	4.9N	20.1E	50	LO	250	N	N	19910406	123529	243	274	61 15
77	31	ZAIRE	NORTHERN BORDER W C.A.R.	4.6N	20.6E	4.6N	20.6E	60	LO	250	N	N	19910406	123539	243	274	61 15
77	32	ZAIRE		2.8N	23.7E	2.8N	23.7E	80	LO	250	N	N	19910406	123639	243	277	57 15
77	33	ZAIRE	VRY CLOUDY	0.6N	27.5E	0.6N	27.5E	100	LO	250	N	N	19910406	123752	243	279	53 15
77	34	UGANDA	LAKE VICTORIA	1.0S	33.0E	0.3S	29.0E	60	LO	250	N	N	19910406	123820	243	280	51 15
77	35	KENYA	WE LAKE VICTORIA	0.5S	34.0E	0.5S	29.4E	60	LO	250	N	N	19910406	123827	243	280	51 15
77	36	TANZANIA	S. LAKE VICTORIA	1.8S	33.4E	0.6S	29.6E	60	LO	250	N	N	19910406	123832	243	280	50 15
77	37	TANZANIA	S.L.K. VICTORIA, SPEKE GULF	2.4S	33.0E	0.9S	30.0E	40	LO	250	N	N	19910406	123839	243	281	50 15
77	38	KENYA	NE.L.K. VICTORIA, KAVIRONDO	0.0S	34.0E	1.2S	30.5E	60	LO	250	N	N	19910406	123849	243	281	49 15
77	39	KENYA	NE.L.K. VICTORIA, KAVIRONDO	0.8S	34.1E	1.4S	30.8E	60	LO	250	N	N	19910406	123855	243	281	49 15
77	40	TANZANIA	LK NATRON AREA	2.4S	36.1E	1.8S	31.7E	60	LO	250	N	N	19910406	123911	243	281	48 15
77	41	TANZANIA	LK MANYARA	3.6S	35.8E	2.0S	31.9E	60	LO	250	N	N	19910406	123916	242	281	48 15
77	42	TANZANIA	AFRICAN RIFT AREA	2.2S	32.3E	2.2S	32.3E	60	LO	250	N	N	19910406	123923	242	281	47 15
77	43	TANZANIA	AFRICAN RIFT AREA	2.7S	33.1E	2.7S	33.1E	60	LO	250	N	N	19910406	123938	242	282	46 15
77	44	TANZANIA	KIKULETWA LK AREA	3.6S	37.4E	2.9S	33.5E	60	LO	250	N	N	19910406	123945	242	282	46 15
77	45	TANZANIA	KIKULETWA LK AREA	4.4S	37.5E	3.0S	33.7E	60	LO	250	N	N	19910406	123949	242	282	46 15

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	EL	SUM
77	46	TANZANIA	UNMAPPED LAKE/RESVR.	5.1S	39.1E	3.2S	34.1E	70	LO	250	N	19910406	123957	242	282	45
77	47	TANZANIA	PEMBA ISLAND, TANGA AREA	5.1S	39.1E	3.5S	34.6E	80	LO	250	N	19910406	124006	242	282	45
77	48	TANZANIA	PEMBA ISLAND, TANGA AREA	5.2S	39.6E	4.1S	35.6E	50	LO	250	N	19910406	124028	242	282	43
77	49	TANZANIA	ZANZIBAR ISLAND	6.3S	39.5E	4.2S	35.8E	40	LO	250	N	19910406	124030	242	282	43
77	50	TANZANIA	PEMBA ISLAND	5.3S	39.8E	4.8S	36.9E	40	LO	250	N	19910406	124050	242	283	42
77	51	TANZANIA	ZANZIBAR ISLAND	6.4S	39.4E	5.0S	37.1E	40	LO	250	N	19910406	124054	242	283	42
77	52	TANZANIA	MAFIA ISLAND	7.8S	39.8E	5.2S	37.5E	50	LO	250	N	19910406	124102	242	283	41
77	53	TANZANIA	MATONDOMI AREA, COAST	2.1S	41.0E	5.5S	37.9E	30	LO	250	N	19910406	124110	242	283	41
77	54	AFRICA	SE COAST			6.6S	40.0E	60	HO	250	N	19910406	124149	242	283	38
77	55	INDIAN OCEAN	AREA NW. OF MADAGASCAR			9.1S	44.5E	20	LO	250	N	19910406	124314	242	283	33
77	56	INDIAN OCEAN	SEYCHELLES	9.8S	47.6E	10.7S	47.5E	40	LO	250	N	19910406	124409	242	283	29
77	57	MADAGASCAR	NW COAST, VRY CLDY, DARK			11.1S	48.2E	80	LO	250	N	19910406	124423	242	283	29
77	58	MADAGASCAR	NW COAST, VRY CLDY, DARK			11.4S	48.8E	80	LO	250	N	19910406	124433	242	283	28
77	59	USA-FL	CENTRAL FL, VRY CLDY	28.5N	81.0W	28.5N	78.0W	90	LO	250	N	19910406	134834	247	104	36
77	60	USA-FL	CENTRAL FL, VRY CLDY	28.5N	81.0W	28.5N	77.5W	90	LO	250	N	19910406	134842	247	104	37
77	61	USA-FL	TAMPA AREA, VRY CLDY	27.8N	81.5W	28.5N	76.0W	80	LO	250	N	19910406	134904	247	105	38
77	62	BAHAMAS	ANDROS ISLAND, CLDY	24.5N	77.8W	28.4N	74.5W	40	LO	250	N	19910406	134925	246	106	39
77	63	CAPE VERDE ISLANDS	FOGO, BRAVA, IS. WAKES	14.9N	24.4W	15.3N	23.4W	0	LO	250	N	19910406	140253	244	218	78
77	64	CAPE VERDE ISLANDS	SANTIAGO	15.0N	23.6W	15.2N	23.2W	0	LO	250	N	19910406	140257	244	218	78
77	65	CAPE VERDE ISLANDS	SANTIAGO, MATO ISLANDS	15.3N	23.4W	15.0N	22.8W	0	LO	250	N	19910406	140305	244	220	78
77	66	CAPE VERDE ISLANDS	BOA VISTA, CLD WAKE	16.1N	22.7W	14.9N	22.6W	20	LO	250	N	19910406	140308	244	221	78
77	67	CAPE VERDE ISLANDS	BOA VISTA, SAL, CLD WAKES	16.3N	22.8W	14.7N	22.1W	40	LO	250	N	19910406	140316	244	224	78
77	68	CAPE VERDE ISLANDS	BOA VISTA, SAL, CLD WAKES	16.1N	22.8W	14.0N	20.7W	60	LO	250	N	19910406	140342	244	231	77
77	69	SENEGAL	COAST AREA, CASAMANCE	12.6N	16.5W	12.4N	17.5W	0	LO	250	N	19910406	140439	244	245	75
77	70	GUINEA BISSAU	COAST AREA, RIO CACHEU			12.2N	17.1W	0	LO	250	N	19910406	140447	244	247	75
77	71	GUINEA BISSAU	ARQUIPELAGO DOS BIJAGOS	11.5N	15.9W	12.1N	16.9W	0	LO	250	N	19910406	140451	244	248	75
77	72	GUINEA BISSAU	ARQUIPELAGO DOS BIJAGOS	11.5N	16.2W	12.0N	16.8W	0	LO	250	N	19910406	140453	244	248	75
77	73	GUINEA BISSAU	ARQUIPELAGO DOS BIJAGOS			11.8N	16.3W	0	LO	250	N	19910406	140502	244	250	74
77	74	GUINEA BISSAU	SUNGLINT COASTAL WATERS			11.3N	15.3W	0	LO	250	N	19910406	140519	244	253	74
77	75	GUINEA BISSAU	SUNGLINT COASTAL WATERS			11.0N	14.9W	0	LO	250	N	19910406	140528	244	254	73
77	76	GUINEA BISSAU	SUNGLINT COASTAL WATERS			10.6N	14.0W	0	LO	250	N	19910406	140543	244	256	72
77	77	GUINEA	CONAKRY AREA, HAZY	9.5N	13.8W	10.3N	13.4W	5	LO	250	N	19910406	140554	244	258	72
77	78	GUINEA	COASTAL AREA N. OF CONAKRY	10.0N	14.6W	9.9N	12.6W	0	LO	250	N	19910406	140609	244	260	71
77	79	SIERRA LEONE	HAZY, CLDY			9.5N	11.9W	60	LO	250	N	19910406	140623	243	262	70
77	80	LIBERIA	HAZY, CLDY, T-STORM			8.5N	10.2W	80	LO	250	N	19910406	140655	243	265	69
77	81	LIBERIA	HAZY, CLDY			7.8N	8.9W	80	LO	250	N	19910406	140718	243	267	67
77	82	LIBERIA	HAZY, CLDY, COASTLINE			6.4N	6.4W	80	LO	250	N	19910406	140806	243	271	65
77	83	LIBERIA	HAZY, CLDY, COASTLINE			6.1N	5.9W	80	LO	250	N	19910406	140816	243	272	64
77	84	GABON	CLDY, COASTLINE	2.8S	10.2E	2.4S	8.7E	70	LO	250	N	19910406	141255	242	282	47
77	85	GABON	T-STORM, CLDY			2.5S	8.9E	80	LO	250	N	19910406	141258	242	282	47

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		MADIR		CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM	EL	OR
				LAT	LONG	LAT	LONG												
77	86	ZAIRE		3.0S	9.8E			90	LO	250	N	N	19910406	141315	242	282	46	16	
77	87	ZAIRE		3.5S	10.6E			90	LO	250	N	N	19910406	141330	242	282	45	16	
77	88	ZAIRE		4.5S	12.3E			80	LO	250	N	N	19910406	141403	242	283	43	16	
77	89	ZAIRE		4.7S	12.7E			80	LO	250	N	N	19910406	141410	242	283	43	16	
77	90	AFRICA	OBLIQUE, SKELETON COAST	6.4S	15.8E			70	HO	250	N	N	19910406	141509	242	283	39	16	
77	91	AFRICA	OBLIQUE, SKELETON COAST	7.0S	16.8E			60	HO	250	N	N	19910406	141529	242	283	38	16	
77	92	ANGOLA	ZAMBEZI RIVER BASIN	8.4S	19.4E			70	LO	250	N	N	19910406	141616	242	284	35	16	
77	93	ANGOLA	ZAMBEZI RIVER BASIN	8.8S	20.0E			90	LO	250	N	N	19910406	141628	242	284	34	16	
77	94	ANGOLA	ZAMBEZI RIVER BASIN	9.7S	21.7E			80	LO	250	N	N	19910406	141700	242	284	32	16	
77	95	ANGOLA	ZAMBEZI RIVER BASIN	10.2S	22.6E			70	LO	250	N	N	19910406	141717	242	284	31	16	
77	96	ZAMBIA	ZAMBEZI RIVER BASIN	10.3S	22.8E			70	LO	250	N	N	19910406	141721	242	284	31	16	
77	97	ZAMBIA	ZAMBEZI RIVER	15.0S	23.0E	10.4S	23.1E	70	LO	250	N	N	19910406	141725	242	284	31	16	
77	98	ZAMBIA	LAKE KARIBA	16.8S	28.0E	12.2S	26.4E	60	LO	250	N	N	19910406	141826	242	283	27	16	
77	99	ZAMBIA	LAKE KARIBA	17.0S	27.7E	12.3S	26.8E	60	LO	250	N	N	19910406	141830	242	283	26	16	
77	100	BOTSWANA	MAKGADIKGADI PANS	20.5S	25.6E	12.7S	27.5E	40	LO	250	N	N	19910406	141846	242	283	25	16	
77	101	BOTSWANA	MAKGADIKGADI PANS	20.5S	25.6E	13.0S	28.1E	40	LO	250	N	N	19910406	141857	242	283	25	16	
77	102	ZIMBABWE	LAKE KARIBA, E. END	16.7S	28.3E	13.4S	28.8E	30	LO	250	N	N	19910406	141910	242	283	24	16	
77	103	ZIMBABWE	LAKE KARIBA, MIDDLE	16.9S	28.0E	13.5S	29.0E	30	LO	250	N	N	19910406	141914	242	283	24	16	
77	104	ZIMBABWE	LAKE KARIBA, W. END	17.5S	27.4E	13.6S	29.3E	40	LO	250	N	N	19910406	141918	242	283	23	16	
77	105	MOZAMBIQUE	MOUNTAINOUS, HAZY	14.7S	31.5E			20	LO	250	N	N	19910406	141958	242	283	21	16	
78	1	USA-CA	SALTON SEA, IMP. VALLEY	32.5N	115.5W	28.2N	113.2W	0	LO	250	N	N	19910409	150146	244	93	22	63	
78	2	USA-CA	SALTON SEA, MOJAVE DES.	33.5N	116.0W	28.2N	113.0W	0	LO	250	N	N	19910409	150149	244	93	22	63	
78	3	USA-CA	MOJAVE DES., DEATH VAL.	35.0N	116.5W	28.2N	112.7W	0	LO	250	N	N	19910409	150153	244	93	23	63	
78	4	USA-NV	LAKE MEAD, LAS VEGAS	36.5N	115.0W	28.2N	112.5W	0	HO	250	N	N	19910409	150156	244	93	23	63	
78	5	USA-CA	SO. CAL. COAST/MTNS.	33.0N	116.0W	28.2N	112.1W	0	LO	250	N	N	19910409	150202	244	94	23	63	
78	6	MEXICO	COLORADO RIVER DELTA	32.5N	115.0W	28.1N	111.9W	0	LO	250	N	N	19910409	150206	244	94	23	63	
78	7	MEXICO	GRAND DESERT, PINACATES	31.5N	113.5W	28.1N	111.6W	0	LO	250	N	N	19910409	150209	244	94	24	63	
78	8	USA-AZ	SW ARIZONA DESERT	33.0N	112.5W	28.1N	111.4W	0	LO	250	N	N	19910409	150212	244	94	24	63	
78	9	USA-AZ	SONORAN DESERT	33.5N	114.0W	28.1N	111.2W	0	LO	250	N	N	19910409	150216	244	94	24	63	
78	10	USA-AZ	L. MEAD, GRAND CANYON	35.5N	114.0W	28.1N	110.8W	0	HO	250	N	N	19910409	150221	244	94	24	63	
78	11	USA-AZ	L. MEAD, GRAND CANYON	35.5N	113.0W	28.0N	110.6W	0	HO	100	N	N	19910409	150224	244	94	25	63	
78	12	USA-AZ	PHOENIX, GRAND CANYON	35.0N	112.5W	28.0N	110.3W	0	LO	250	N	N	19910409	150229	244	95	25	63	
78	13	USA-AZ	GRAND CANYON	36.0N	113.0W	28.0N	110.0W	0	HO	250	N	N	19910409	150233	244	95	25	63	
78	14	USA-AZ	PHOENIX REGION	33.5N	112.0W	27.9N	109.3W	0	LO	250	N	N	19910409	150244	244	95	26	63	
78	15	USA-AZ	SAN FRANCISCO VOL. AREA	35.0N	112.0W	27.9N	109.1W	0	LO	250	N	N	19910409	150247	244	95	26	63	
78	16	USA-AZ	COLORADO PLATEAU	35.5N	110.5W	27.9N	108.9W	15	HO	250	N	N	19910409	150250	244	95	26	63	
78	17	USA-AZ	PAINTED DESERT	35.5N	111.0W	27.8N	108.7W	10	HO	250	N	N	19910409	150253	244	95	26	63	
78	18	USA-AZ	CHUSKA MTNS. PAINTED DES	34.5N	110.0W	27.8N	108.5W	10	HO	250	N	N	19910409	150256	244	95	27	63	
78	19	USA-AZ	MOGOLLON RIM	33.0N	109.0W	27.8N	108.1W	0	LO	250	N	N	19910409	150301	244	96	27	63	
78	20	USA-NM	SW N. MEXICO NEAR DEMING	32.5N	108.5W	27.7N	107.6W	0	LO	250	N	N	19910409	150309	244	96	27	63	

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
78	21	USA-NM	WHITE SANDS, LAS CRUCES	33.0N 106.5W	27.7N 107.4W	0	L0	250	N	N	19910409	150312	244	96	28	63
78	22	USA-NM	N. RIO GRANDE RIFT VAL.	35.5N 106.0W	27.7N 107.1W	0	H0	250	N	N	19910409	150316	244	96	28	63
78	23	USA-CO	SANGRE DE CRISTO MTS.	37.0N 105.0W	27.6N 106.8W	5	H0	250	N	N	19910409	150320	244	96	28	63
78	24	USA-NM	GUADALUPE MTS.	32.0N 105.0W	27.6N 106.4W	0	L0	250	N	N	19910409	150326	244	96	29	63
78	25	MEXICO	SIERRA MADRE ORIENTAL	25.5N 100.5W	26.3N 98.5W	15	NV	250	N	N	19910409	150525	245	100	36	63
78	26	GULF OF MEXICO	ALACRAN REEF	22.5N 89.5W	5.1N 42.9W	0	L0	250	N	N	19910409	150830	245	105	48	63
78	27	USA-FL	CAPE CANAVERAL	28.5N 80.5W	4.8N 42.5W	60	L0	250	N	N	19910409	150928	245	107	52	63
78	28	USA-FL	CENT. FLORIDA, SARASOTA	27.5N 80.0W	4.9N 42.8W	50	L0	250	N	N	19910409	151004	245	108	54	63
78	29	CUBA	ZAPATA PEN., BAY OF PIGS	22.5N 81.5W	5.0N 43.4W	25	L0	250	N	N	19910409	151041	245	109	56	63
78	30	CUBA	RIO CAQMAO RESERVOIR	21.5N 78.0W	5.2N 43.6W	15	L0	250	N	N	19910409	151054	245	109	57	63
78	31	CUBA	GULF OF GUACANAYABO	20.5N 77.0W	5.5N 44.4W	35	L0	250	N	N	19910409	151126	245	109	59	63
78	32	CUBA	GULF OF GUACANAYABO	20.0N 77.5W	5.5N 44.5W	15	L0	250	N	Y	19910409	151129	245	109	59	63
78	33	CUBA	SIERRA MAESTRA	20.0N 76.5W	5.5N 44.6W	20	L0	250	N	N	19910409	151133	245	110	60	63
78	34	CUBA	GUANTANAMO BAY	20.0N 75.0W	5.8N 45.4W	25	L0	250	N	N	19910409	151158	245	110	61	63
78	35	CUBA	PTS. DEL FRAILE, CALETA	20.5N 74.5W	5.9N 45.4W	30	L0	250	N	S	19910409	151200	245	110	61	63
78	36	CUBA	POINT CABANAS	20.5N 75.0W	5.9N 45.5W	30	L0	250	N	S	19910409	151203	245	110	62	63
78	37	CUBA	NIPE BAY, PT. GARCIA	21.0N 75.5W	5.9N 45.6W	25	L0	250	N	Y	19910409	151205	245	110	62	63
78	38	HAITI	GONAVE IS., CAPE ST MARC	19.0N 73.0W	6.2N 46.3W	15	NV	250	N	Y	19910409	151228	244	111	63	63
78	39	HAITI	GULF OF GONAVE	19.5N 73.0W	6.3N 46.4W	10	L0	250	N	Y	19910409	151231	244	111	63	63
78	40	HAITI	TORTURE IS. CAPE MOLE	20.0N 73.0W	6.3N 46.5W	5	L0	250	N	Y	19910409	151234	244	111	64	63
78	41	HAITI	TORTURE IS. CAPE HAITIEN	20.0N 72.5W	6.4N 46.7W	10	L0	250	N	Y	19910409	151240	244	111	64	63
78	42	HAITI	MANZANILLO BAY	20.0N 72.0W	6.4N 46.8W	20	L0	250	N	Y	19910409	151243	244	111	64	63
78	43	DOMINICAN REPUBLIC	CENTRAL RANGE	19.5N 71.5W	6.5N 46.9W	30	L0	250	N	Y	19910409	151246	244	111	64	63
78	44	DOMINICAN REPUBLIC	CENTRAL RANGE	19.0N 71.0W	6.5N 47.0W	20	NV	250	N	Y	19910409	151249	244	111	65	63
78	45	DOMINICAN REPUBLIC	LAKE ENRIQUILLO	18.5N 71.5W	6.6N 47.0W	15	NV	250	N	Y	19910409	151251	244	111	65	63
78	46	DOMINICAN REPUBLIC	NEIBA, OCOA BAYS	18.5N 71.0W	6.6N 47.2W	5	NV	250	N	Y	19910409	151255	244	111	65	63
78	47	DOMINICAN REPUBLIC	NEIBA, OCOA BAYS	18.0N 71.0W	6.7N 47.4W	5	NV	250	N	Y	19910409	151302	244	111	65	63
78	48	DOMINICAN REPUBLIC	SAONA IS., YUMA BAY	18.5N 68.5W	7.1N 48.2W	35	L0	250	N	N	19910409	151328	244	112	67	63
78	49	PUERTO RICO	PONCE, WEST HALF OF IS.	18.5N 66.5W	7.7N 49.6W	30	L0	250	N	N	19910409	151415	244	112	70	63
78	50	PUERTO RICO	ROOSEVELT ROADS, VIEQUES	18.0N 65.5W	7.8N 49.8W	25	L0	250	N	N	19910409	151420	244	112	70	63
78	51	LESSER ANTILLES	ST CHRISTOPHER, NEVIS IS	17.0N 62.5W	8.5N 51.2W	40	L0	250	N	N	19910409	151519	244	113	74	63
78	52	LESSER ANTILLES	ANTIGUA AND BARBUDA IS.	17.5N 62.0W	8.5N 51.4W	30	L0	250	N	N	19910409	151526	244	113	75	63
78	53	MEXICO	MAGDALENA BAY IN SUNGLIN	25.0N 111.5W	24.8N 115.4W	0	L0	250	N	Y	19910409	164038	246	103	43	64
78	54	MEXICO	LA PAZ BAY IN SUNGLINT	24.0N 110.5W	24.7N 114.9W	0	L0	250	N	Y	19910409	164045	246	103	43	64
78	55	MEXICO	LA PAZ BAY IN SUNGLINT	23.5N 110.0W	24.5N 114.4W	0	L0	250	N	Y	19910409	164054	246	103	44	64
78	56	MEXICO	SIERRA DE LA GIGANTA	23.5N 110.0W	24.4N 114.0W	0	L0	250	N	Y	19910409	164100	246	104	44	64
78	57	MEXICO	SIERRA DE LA GIGANTA	23.0N 109.5W	24.3N 113.5W	0	L0	250	N	Y	19910409	164108	246	104	44	64
78	58	MEXICO	MIGUEL HIDALGO RES.	27.0N 109.0W	23.3N 110.0W	0	L0	250	N	N	19910409	164203	246	105	48	64
78	59	MEXICO	MIGUEL HIDALGO RES.	26.5N 108.0W	23.2N 109.6W	0	L0	250	N	N	19910409	164209	246	105	48	64
78	60	MEXICO	SIERRA MADRE OCCIDENTAL	22.5N 104.5W	22.8N 108.4W	65	L0	250	N	N	19910409	164229	246	106	50	64

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR	
78	61	MEXICO	SIERRA MADRE OCCIDENTAL	23.0N 104.0W	22.7N 108.1W	45	LO	250	N	N	19910409	164233	246	106	50	64	
78	62	MEXICO	SMOKE PALL		21.9N 105.7W	35	HO	250	N	N	19910409	164313	246	107	52	64	
78	63	MEXICO	SMOKE PALL		21.9N 105.4W	35	HO	250	N	N	19910409	164317	246	107	53	64	
78	64	MEXICO	MALINCHE VOL., PUEBLA		19.5N 98.5W	5	NV	250	N	Y	19910409	164440	246	109	58	64	
78	65	MEXICO	APIZACO		19.5N 98.0W	15	LO	250	N	Y	19910409	164446	246	109	58	64	
78	66	MEXICO	INFIERNILLO RES., SMOKE		18.5N 102.5W	40	HO	250	N	N	19910409	164456	246	109	59	64	
78	67	BRAZIL	RIO SAO FRANCISCO BASIN		11.5S 43.5W	60	LO	250	N	N	19910409	170143	245	298	55	64	
78	68	BRAZIL	RIO SAO FRANCISCO BASIN		10.0S 41.5W	65	LO	250	N	N	19910409	170146	245	298	55	64	
78	69	BRAZIL	RIO SAO FRANCISCO BASIN		9.0S 40.0W	55	LO	250	N	N	19910409	170149	245	298	55	64	
78	70	BRAZIL	RIO SAO FRANCISCO BASIN		9.0S 39.0W	60	HO	250	N	N	19910409	170159	245	298	54	64	
78	71	BRAZIL	RIO SAO FRANCISCO BASIN			9.8S 44.0W	60	HO	250	N	N	19910409	170203	245	298	54	64
78	72	BRAZIL	ESPERANCA RESERVOIR		7.0S 43.0W	10.1S 43.3W	65	LO	250	N	Y	19910409	170215	245	298	53	64
78	73	BRAZIL	ESPERANCA RESERVOIR		7.0S 44.0W	10.3S 43.0W	70	LO	250	N	Y	19910409	170221	245	297	53	64
78	74	BRAZIL	OROS RESERVOIR		7.0S 38.0W	10.5S 42.6W	75	LO	250	N	N	19910409	170229	245	297	52	64
78	75	BRAZIL	BORBOREMA PLATEAU			10.9S 42.0W	70	LO	250	N	N	19910409	170240	245	297	52	64
78	76	BRAZIL	CITY OF MACEIO, COAST		9.5S 36.0W	11.2S 41.4W	55	LO	250	N	N	19910409	170251	245	297	51	64
78	77	BRAZIL	EASTERN BRAZIL			11.5S 40.8W	65	HO	250	N	N	19910409	170301	245	297	50	64
78	78	BRAZIL	COAST NORTH OF RECIFE		7.0S 35.0W	11.6S 40.5W	60	HO	250	N	Y	19910409	170307	245	297	50	64
78	79	BRAZIL	COAST NEAR RECIFE		8.0S 35.0W	11.8S 40.2W	60	HO	250	N	Y	19910409	170312	245	297	50	64
78	80	BRAZIL	EASTERN BRAZIL			12.0S 39.8W	70	HO	250	N	N	19910409	170321	245	297	49	64
78	81	BRAZIL	EASTERN BRAZIL			12.4S 38.9W	65	LO	250	N	N	19910409	170336	245	296	48	64
78	82	BRAZIL	COAST NORTH OF MACEIO		9.0S 35.5W	12.9S 38.1W	55	LO	250	N	Y	19910409	170352	245	296	47	64
78	83	BRAZIL	COAST NORTH OF MACEIO		8.5S 35.0W	13.1S 37.6W	60	HO	250	N	Y	19910409	170400	245	296	47	64
78	84	BRAZIL	CITY OF MACEIO, COAST		9.5S 36.0W	13.5S 36.8W	65	LO	250	N	N	19910409	170415	245	296	46	64
78	85	PERU	SECHURA DES., PT. AGUJA		6.5S 80.5W	4.3S 77.6W	25	LO	250	N	Y	19910409	183225	245	300	66	65
78	86	PERU	SECHURA DESERT		6.5S 80.5W	4.4S 77.5W	35	LO	250	N	Y	19910409	183227	245	300	66	65
78	87	PERU	COAST NEAR CHICLAYO		7.0S 80.0W	4.6S 77.1W	45	LO	250	N	Y	19910409	183235	245	300	66	65
78	88	PERU	COAST NEAR TRUJILLO		8.0S 79.0W	4.8S 76.9W	50	LO	250	N	Y	19910409	183239	245	300	65	65
78	89	PERU	COAST SOUTH OF TRUJILLO		8.5S 79.0W	4.8S 76.8W	50	LO	250	N	Y	19910409	183241	245	300	65	65
78	90	PERU	COAST NEAR FERRAL PEN.		9.0S 78.5W	4.9S 76.6W	55	LO	250	N	Y	19910409	183244	245	300	65	65
78	91	PERU	COAST SOUTH OF CHIMBOTE		9.5S 78.5W	5.0S 76.5W	60	LO	250	N	Y	19910409	183247	245	300	65	65
78	92	PERU	UPPER AMAZON BASIN			5.4S 75.7W	80	HO	250	N	N	19910409	183302	245	300	64	65
78	93	PERU	MARANON, HUALLAGA RIVERS		5.0S 75.5W	5.8S 75.0W	70	NV	250	U	Y	19910409	183315	245	300	63	65
78	94	PERU	MARANON, HUALLAGA RIVERS		5.5S 76.0W	6.1S 74.5W	70	NV	250	U	Y	19910409	183325	245	300	62	65
78	95	PERU	HUALLAGA RIVER		6.0S 75.5W	6.2S 74.3W	75	LO	250	U	Y	19910409	183328	245	300	62	65
78	96	PERU	UCAYALI RIVER			6.3S 74.1W	80	LO	250	U	N	19910409	183332	245	300	62	65
78	97	PERU	UCAYALI RIVER			6.5S 73.8W	80	LO	250	U	Y	19910409	183337	245	299	62	65
78	98	PERU	UCAYALI RIVER			6.6S 73.6W	85	LO	250	U	Y	19910409	183341	245	299	61	65
78	99	PERU	LAKE TITICACA		16.0S 69.5W	11.8S 64.0W	60	HO	250	N	N	19910409	183640	245	297	50	65
78	100	BOLIVIA	LAKES POOPO, COIPASA		19.0S 68.0W	12.0S 63.7W	30	HO	250	N	Y	19910409	183645	245	297	50	65

TABLE 4.3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		MADIR		CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN	EL	OR
				LAT	LONG	LAT	LONG												
73	101	BOLIVIA	L. POOPO, UYUNI SALAR	20.5S	67.5W	12.0S	63.6W	15	HO	250	N	Y	19910409	183648	245	297	49	65	
78	102	BOLIVIA	SALAR DE UYUNI	21.5S	68.0W	12.2S	63.4W	15	HO	250	N	Y	19910409	183652	245	297	49	65	
78	103	BOLIVIA	BENI, MADRE DE DIOS R.	11.0S	68.0W	12.6S	62.5W	65	LO	250	N	N	19910409	183708	245	297	48	65	
78	104	BOLIVIA	MOJOS PLAIN, SMOKE			12.8S	62.1W	25	LO	250	N	N	19910409	183715	245	297	48	65	
78	105	BOLIVIA	MOJOS PLAIN, SMOKE			12.9S	61.9W	35	LO	250	N	N	19910409	183718	245	297	48	65	
78	106	BOLIVIA	MOJOS PLAIN, SMOKE			13.0S	61.7W	30	LO	250	N	N	19910409	183722	245	297	47	65	
78	107	BOLIVIA	NEAR THE PARAGUA RIVER			13.3S	61.1W	50	LO	250	N	N	19910409	183733	245	296	47	65	
78	108	BOLIVIA	NEAR THE PARAGUA RIVER			13.4S	60.8W	55	LO	250	N	N	19910409	183737	245	296	46	65	
78	109	BOLIVIA	NEAR THE PARAGUA RIVER			13.5S	60.7W	65	LO	250	N	N	19910409	183740	245	296	46	65	
78	110	BOLIVIA	NEAR THE PARAGUA RIVER			13.6S	60.5W	75	LO	250	N	N	19910409	183744	245	296	46	65	
79	1	MEXICO	GUADALUPE ISLAND	29.0N	118.5W	27.4N	119.9W	60	NV	250	N	Y	19910406	151736	246	92	19	17	
79	2	MEXICO	GUADALUPE ISLAND	29.0N	118.5W	27.4N	119.4W	60	NV	250	N	Y	19910406	151744	246	93	19	17	
79	3	USA-CA	SIERRA NEVADA MTNS.	37.5N	118.0W	27.6N	118.4W	65	HO	250	N	N	19910406	151758	246	93	20	17	
79	4	USA-CA	SALTON SEA, IMPERIAL VAL	32.5N	115.5W	28.0N	114.2W	0	LO	250	N	N	19910406	151901	246	96	24	17	
79	5	USA-CA	MOJAVE DESERT	35.0N	117.0W	28.1N	113.8W	70	LO	250	N	N	19910406	151907	246	96	25	17	
79	6	USA-CA	SALTON SEA, IMP. VALLEY	32.5N	115.5W	28.1N	112.7W	0	LO	250	N	N	19910406	151922	246	96	26	17	
79	7	USA-AZ	PHOENIX AREA	33.5N	112.0W	28.2N	112.2W	0	LO	250	N	N	19910406	151930	246	97	26	17	
79	8	USA-AZ	GRAND CANYON, FLAGSTAFF	35.5N	112.0W	28.2N	111.5W	40	HO	250	N	N	19910406	151940	246	97	27	17	
79	9	USA-NM	WHITE SANDS, ALAMOGORDO	33.0N	106.5W	28.4N	108.0W	0	LO	250	N	Y	19910406	152031	246	99	30	17	
79	10	USA-NM	WHITE SANDS, ALAMOGORDO	33.0N	106.5W	28.4N	107.7W	0	LO	250	N	Y	19910406	152035	246	99	30	17	
79	11	USA-TX	EL PASO, RIO GRANDE	31.5N	106.5W	28.4N	107.3W	0	LO	250	N	Y	19910406	152041	246	100	31	17	
79	12	USA-TX	EL PASO, RIO GRANDE	31.5N	106.5W	28.5N	106.5W	0	LO	250	N	Y	19910406	152053	246	100	31	17	
79	13	USA-NM	CABILLO RES., BLACK RA.	33.0N	107.0W	28.5N	105.5W	0	LO	250	N	Y	19910406	152107	246	101	32	17	
79	14	USA-TX	GUADALUPE PK., SALT BAS.	32.0N	105.0W	28.5N	102.8W	5	LO	250	N	N	19910406	152147	246	103	35	17	
79	15	USA-TX	AMISTAD RESERVOIR	29.5N	101.0W	28.5N	100.5W	50	LO	250	N	N	19910406	152220	246	104	37	17	
79	16	USA-AL	MOBILE AREA	30.5N	88.0W	27.4N	87.2W	55	LO	250	N	N	19910406	152536	246	114	49	17	
79	17	MEXICO	COAST NEAR MAZATLAN	23.5N	106.5W	27.4N	110.5W	5	LO	250	N	Y	19910406	165911	246	114	49	18	
79	18	MEXICO	OCCIDENTAL MTS., SMOKE	23.0N	104.5W	27.2N	109.4W	5	LO	250	N	Y	19910406	165927	246	115	50	18	
79	19	MEXICO	CHAPALA LK., GUADALAJARA	20.5N	103.5W	26.3N	104.3W	5	LO	250	N	N	19910406	170043	246	119	55	18	
79	20	MEXICO	S. MEXICAN PLATEAU	21.0N	101.0W	25.6N	100.7W	10	LO	250	N	N	19910406	170138	246	122	58	18	
79	21	VENEZUELA	MARGARITA, COCHE ISLANDS	11.5N	64.5W	12.9N	66.2W	45	LO	250	N	N	19910406	171115	244	239	77	18	
79	22	VENEZUELA	ORINOCO RIVER, CARONI R.	9.5N	63.5W	12.1N	64.7W	70	LO	250	N	Y	19910406	171142	244	246	76	18	
79	23	VENEZUELA	ORINOCO RIVER, CARONI R.	9.0N	62.5W	12.0N	64.5W	70	LO	250	N	Y	19910406	171145	244	246	76	18	
79	24	VENEZUELA	ORINOCO RIVER MOUTH	9.0N	62.0W	11.9N	64.3W	80	LO	250	N	Y	19910406	171149	244	247	76	18	
79	25	VENEZUELA	ORINOCO RIVER MOUTH	9.0N	60.5W	11.7N	63.8W	60	LO	250	N	N	19910406	171158	244	249	75	18	
79	26	TRINIDAD AND TOBAGO	TOBAGO ISLAND	11.5N	60.5W	11.3N	63.1W	20	LO	250	N	N	19910406	171211	244	251	75	18	
79	27	LESSER ANTILLES	GRENADA, CARRIACOU IS.	12.0N	61.5W	11.2N	62.8W	25	LO	250	N	N	19910406	171216	244	252	74	18	
79	28	GUAYANA	WAINI RIVER MOUTH	8.5N	60.0W	10.4N	61.4W	60	LO	250	N	N	19910406	171242	244	256	73	18	
79	29	GUAYANA	ESSEQUIBO RIVER MOUTH	7.0N	58.5W	9.3N	59.4W	65	LO	250	N	N	19910406	171319	244	261	71	18	
79	30	GUAYANA	COASTAL REG., SED. PLUME	7.0N	58.0W	8.9N	58.6W	60	LO	250	N	N	19910406	171335	244	263	70	18	



TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
79	31	GUYANA	BERBICE RIVER MOUTH	6.5N 57.5W	8.3N 57.4W	35	LO	250	N	N	19910406	171356	244	285	69	18
79	32	SURINAM	SURINAM R., PARAMARIBO	6.0N 55.0W	7.3N 55.7W	45	LO	250	N	N	19910406	171428	244	288	68	18
79	33	SURINAM	BLOMESTEIN LAKE	5.0N 55.0W	6.6N 54.5W	60	LO	250	N	N	19910406	171451	243	270	66	18
79	34	FRENCH GUIANA	MAHURY RIVER, CAYENNE	5.0N 52.5W	5.8N 53.0W	40	LO	250	N	N	19910406	171520	243	272	65	18
79	35	BRAZIL	PT. ORANGE, OIAROOUE R.	4.0N 51.5W	5.3N 52.1W	30	LO	250	N	N	19910406	171536	243	273	64	18
79	36	BRAZIL	CALCOENE RIVER MOUTH	2.5N 51.0W	4.1N 50.0W	75	LO	250	N	N	19910406	171616	243	275	61	18
79	37	BRAZIL	ARAGUARI R. MOUTH, PLUME	1.5N 50.0W	3.4N 48.9W	55	LO	250	N	N	19910406	171637	243	276	60	18
79	38	BRAZIL	AMAZON RIVER DELTA	1.0N 50.0W	3.3N 48.7W	65	LO	250	N	N	19910406	171641	243	277	60	18
79	39	BRAZIL	AMAZON RIVER DELTA	0.5N 50.5W	3.1N 48.4W	70	LO	250	N	Y	19910406	171647	243	277	59	18
79	40	BRAZIL	AMAZON RIVER DELTA	0.5N 49.5W	2.8N 47.8W	60	LO	250	N	N	19910406	171659	243	277	59	18
79	41	BRAZIL	TOCANTINS, PARA RIVERS	2.5S 49.5W	2.1N 46.6W	65	LO	250	N	N	19910406	171722	243	278	57	18
79	42	BRAZIL	MARACANA BAY	0.5S 47.5W	1.4N 45.4W	65	NV	250	N	Y	19910406	171744	243	279	56	18
79	43	BRAZIL	MAIAU, CAETE BAYS	1.0S 46.5W	1.3N 45.2W	45	NV	250	N	Y	19910406	171748	243	279	56	18
79	44	BRAZIL	GURUPI BAY	1.0S 46.0W	1.1N 45.0W	35	NV	250	N	Y	19910406	171753	243	279	55	18
79	45	BRAZIL	TURIACU BAY, MAIAU IS.	1.5S 45.0W	0.9N 44.6W	55	NV	250	N	N	19910406	171800	243	279	55	18
79	46	BRAZIL	ST. MARCOS, ST. JOSE BAYS	2.5S 44.0W	0.2S 42.8W	35	NV	250	N	Y	19910406	171835	243	280	53	18
79	47	BRAZIL	COASTAL SAND DUNE FIELD	2.5S 43.0W	0.4S 42.4W	25	NV	250	N	Y	19910406	171842	243	281	52	18
79	48	BRAZIL	PARNAIBA RIVER MOUTH	2.5S 42.0W	0.5S 42.2W	30	LO	250	N	Y	19910406	171847	243	281	52	18
79	49	BRAZIL	PARNAIBA RIVER MOUTH	3.0S 41.5W	0.7S 41.8W	20	LO	250	N	Y	19910406	171853	243	281	52	18
79	50	BRAZIL	PARNAIBA RIVER	3.5S 42.0W	1.0S 41.4W	50	LO	250	N	Y	19910406	171902	243	281	51	18
79	51	BRAZIL	COAST NEAR ACARAU	3.0S 40.0W	1.7S 40.1W	35	LO	250	N	Y	19910406	171926	243	282	50	18
79	52	BRAZIL	COAST NEAR PATOS	3.0S 39.5W	1.9S 39.8W	30	LO	250	N	Y	19910406	171932	243	282	49	18
79	53	BRAZIL	COAST NEAR TRAIRA	3.5S 39.5W	2.0S 39.6W	30	LO	250	N	Y	19910406	171936	243	282	49	18
79	54	BRAZIL	COAST NEAR FORTALEZA	3.5S 39.0W	2.3S 39.2W	20	LO	250	N	Y	19910406	171943	243	282	49	18
79	55	BRAZIL	FORTALEZA, PT. MUCURIPE	3.5S 38.5W	3.4S 37.2W	15	LO	250	N	Y	19910406	172021	243	283	46	18
79	56	BRAZIL	COAST SOUTH OF FORTALEZA	4.0S 38.0W	3.5S 37.0W	25	LO	250	N	Y	19910406	172025	243	283	46	18
79	57	BRAZIL	MOUTH OF JAGUARIBE R.	4.5S 37.5W	3.7S 36.8W	25	LO	250	N	Y	19910406	172029	243	283	46	18
79	58	BRAZIL	AREIA BRANCA, MOCORO	5.0S 37.5W	3.9S 36.5W	30	LO	250	N	Y	19910406	172036	243	283	45	18
79	59	BRAZIL	PIRANHAS R., MARCAU	5.0S 36.5W	4.1S 36.0W	30	LO	250	N	Y	19910406	172044	243	283	45	18
79	60	BRAZIL	COAST NEAR TOUROS	5.0S 35.5W	4.5S 35.3W	30	LO	250	N	Y	19910406	172058	243	283	44	18
79	61	BRAZIL	COAST NEAR NATAL	5.5S 35.5W	4.7S 35.0W	25	LO	250	N	Y	19910406	172103	243	283	44	18
79	62	BRAZIL	COAST NEAR NATAL	6.0S 35.0W	4.9S 34.7W	15	LO	250	N	Y	19910406	172109	243	283	43	18
79	63	BRAZIL	COAST NEAR JOAO PESSOA	7.5S 35.0W	5.6S 33.3W	30	LO	250	N	Y	19910406	172135	243	283	42	18
79	64	BRAZIL	COAST NEAR RECIFE	8.0S 35.0W	5.9S 32.9W	25	LO	250	N	N	19910406	172143	243	284	41	18
79	65	BRAZIL	COAST NEAR MACEIO	9.0S 35.0W	6.7S 31.4W	30	LO	250	U	N	19910406	172211	243	284	40	18
79	66	PACIFIC OCEAN	OCEAN OFF MEXICAN COAST	15.0N	18.8N 102.9W	10	LO	250	N	N	19910406	184055	245	164	77	19
79	67	MEXICO	SHIP WAKES OFF MEXICO	15.0N	96.0W 96.2W	25	NV	250	N	N	19910406	184251	245	201	79	19
79	68	PACIFIC OCEAN	SHIP WAKES, WAVES	11.5N	15.1N 94.5W	5	LO	250	N	N	19910406	184321	244	212	79	19
79	69	NICARAGUA	L. NICARAGUA, OMETEPE V.	11.5N	97.5W 12.1N	88.5W	30	NV	250	N	19910406	184509	244	245	76	19
79	70	COSTA RICA	GULF OF NICOYA	10.0N	85.0W 11.9N	88.2W	30	LO	250	N	19910406	184515	244	246	76	19

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		MADIR		CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN	EL	OR
				LAT	LONG	LAT	LONG												
79	71	NICARAGUA	L. MANAGUA, MASAYA VOL.	12.0N	86.5W	11.0N	86.3W	20	NV	250	N	N	19910406	184549	244	253	75	19	
79	72	NICARAGUA	L. NICARAGUA, OMETEPE V.	11.5N	85.5W	10.9N	86.1W	20	NV	250	N	N	19910406	184553	244	253	74	19	
79	73	PANAMA	COIBA ISLAND	7.5N	81.5W	8.5W	81.8W	40	LO	250	N	N	19910406	184713	244	264	70	19	
79	74	PANAMA	CENTRAL PANAMA			8.1N	81.0W	80	HO	250	N	N	19910406	184728	244	266	70	19	
79	75	PANAMA	CENTRAL PANAMA			8.0N	80.8W	80	HO	250	N	N	19910406	184731	244	266	69	19	
79	76	PANAMA	CENTRAL PANAMA			7.7N	80.4W	85	HO	250	N	N	19910406	184740	244	267	69	19	
79	77	COLOMBIA	SIMU RIVER MOUTH	9.0N	76.0W	6.3N	77.9W	65	LO	250	N	N	19910406	184827	243	271	66	19	
79	78	COLOMBIA	SIMU RIVER MOUTH	9.0N	76.0W	5.6N	76.5W	65	LO	250	U	N	19910406	184853	243	273	65	19	
79	79	COLOMBIA	SAN JUAN R. DELTA	4.0N	77.0W	4.4N	74.5W	70	LO	250	N	N	19910406	184931	243	275	62	19	
79	80	BRAZIL	AMAZON R., LAKE PIORINI	3.5S	63.5W	0.6S	66.0W	35	LO	250	N	Y	19910406	185214	243	281	53	19	
79	81	BRAZIL	AMAZON R., LAKE TEFÉ	3.5S	64.5W	0.7S	65.8W	35	LO	250	N	Y	19910406	185217	243	281	52	19	
79	82	BRAZIL	AMAZON R., JUPURA R.	2.5S	65.5W	0.7S	65.7W	30	LO	250	N	Y	19910406	185220	243	281	52	19	
79	83	BRAZIL	AMAZON RIVER	2.5S	66.0W	0.8S	65.5W	20	NV	250	N	Y	19910406	185223	243	281	52	19	
79	84	BRAZIL	MADEIRA RIVER	5.5S	60.5W	4.0S	60.0W	65	LO	250	N	N	19910406	185408	243	283	46	19	
79	85	BRAZIL	TELES PIRES RIVER	9.0S	57.5W	5.7S	57.1W	55	LO	250	N	N	19910406	185504	243	284	42	19	
79	86	BRAZIL	TELES PIRES RIVER	9.5S	56.5W	5.9S	56.9W	50	LO	250	N	Y	19910406	185508	243	284	42	19	
79	87	BRAZIL	S. AMAZON BASIN			6.4S	55.9W	65	NV	250	N	N	19910406	185526	243	284	41	19	
79	88	BRAZIL	AMAZON BASIN LAND USE			6.9S	55.1W	35	LO	250	N	N	19910406	185542	243	284	40	19	
79	89	BRAZIL	AMAZON BASIN LAND USE			7.1S	54.6W	35	LO	250	U	N	19910406	185550	243	284	39	19	
79	90	BRAZIL	AMAZON BASIN LAND USE			8.2S	52.6W	55	NV	250	N	N	19910406	185628	243	284	37	19	
79	91	BRAZIL	TOCANTINS RIVER BASIN	13.0S	48.5W	10.6S	48.3W	15	LO	250	N	N	19910406	185748	243	284	32	19	
79	92	BRAZIL	GERAL DO PARANA HILLS			10.8S	47.9W	15	NV	250	N	N	19910406	185755	243	284	31	19	
79	93	BRAZIL	LAND USE PATTERNS			10.9S	47.7W	50	NV	250	N	N	19910406	185759	243	284	31	19	
79	94	BRAZIL	LAND USE PATTERNS			11.2S	47.2W	55	NV	250	N	N	19910406	185809	243	284	31	19	
79	95	BRAZIL	LAND USE PATTERNS			11.3S	46.9W	40	LO	250	N	N	19910406	185814	243	284	30	19	
79	96	BRAZIL	LAND USE PATTERNS			11.4S	46.7W	40	LO	250	N	N	19910406	185818	243	284	30	19	
79	97	BRAZIL	LAND USE PATTERNS			11.5S	46.5W	50	LO	250	N	N	19910406	185822	243	284	30	19	
79	98	BRAZIL	LAND USE PATTERNS			12.1S	45.3W	45	LO	250	N	N	19910406	185843	243	284	28	19	
79	99	BRAZIL	RES. NEAR SAO FRANCISCO	12.0S	43.0W	14.2S	41.1W	65	LO	250	N	N	19910406	185959	243	283	24	19	
79	100	BRAZIL	JEQUITINHONHA RIVER	15.5S	39.5W	14.4S	40.7W	60	HO	250	N	Y	19910406	190007	243	283	23	19	
79	101	BRAZIL	JEQUITINHONHA RIVER	16.5S	40.0W	14.5S	40.4W	70	HO	250	N	Y	19910406	190011	243	283	23	19	
79	102	ATLANTIC OCEAN	GRO PAYLOAD, EARTH LIMB			18.5S	31.4W	70	HO	250	N	N	19910406	190248	243	281	13	19	
79	103	ATLANTIC OCEAN	GRO PAYLOAD, EARTH LIMB			18.9S	30.6W	75	HO	250	N	N	19910406	190303	243	281	12	19	
80	1	MALI	BAOULE, DEGOU RIVERS	10.5N	7.5W	10.1N	7.3W	0	NV	250	N	Y	19910409	121049	246	116	84	61	
80	2	MALI	BAOULE, BANIFING RIVERS	10.5N	7.5W	10.0N	7.2W	5	NV	250	N	Y	19910409	121051	246	116	84	61	
80	3	MALI	BANIFING RIVER	10.5N	7.0W	10.0N	7.1W	5	NV	250	N	Y	19910409	121053	246	117	84	61	
80	4	IVORY COAST	LAND USE	10.0N	7.0W	9.9N	7.0W	0	NV	250	N	N	19910409	121055	246	117	84	61	
80	5	IVORY COAST	NEAR CITY OF BOUNDIALI	10.0N	7.0W	9.9N	6.9W	0	NV	250	N	Y	19910409	121057	246	117	84	61	
80	6	IVORY COAST	NEAR CITY OF BOUNDIALI	9.5N	6.5W	9.8N	6.7W	0	NV	250	N	Y	19910409	121100	246	117	85	61	
80	7	IVORY COAST	NEAR CITY OF BOUNDIALI	9.5N	6.5W	9.7N	6.6W	0	NV	250	N	Y	19910409	121102	246	117	85	61	

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
80	8	IVORY COAST	LAND USE PATTERNS	9.5N 6.5W	9.6N 6.5W	0	NV	250	N	Y	19910409	121105	246	117	85	61
80	9	IVORY COAST	LAND USE PATTERNS	9.5N 6.5W	9.6N 6.5W	0	NV	250	N	Y	19910409	121107	246	117	85	61
80	10	IVORY COAST	LAND USE PATTERNS	9.5N 6.5W	9.5N 6.1W	0	NV	250	N	Y	19910409	121111	246	117	85	61
80	11	IVORY COAST	LAND USE PATTERNS	9.0N 6.5W	9.4N 6.0W	0	NV	250	N	Y	19910409	121113	246	117	85	61
80	12	IVORY COAST	BANDAMA BLANC RIVER	9.0N 5.5W	9.3N 5.8W	5	NV	250	N	Y	19910409	121117	246	117	86	61
80	13	IVORY COAST	BANDAMA BLANC RIVER	8.5N 5.5W	9.2N 5.7W	10	NV	250	N	Y	19910409	121119	246	117	86	61
80	14	IVORY COAST	LAND USE PATTERNS	9.1N 5.5W	9.1N 5.6W	5	NV	250	N	Y	19910409	121122	246	117	86	61
80	15	IVORY COAST	LAND USE PATTERNS	9.1N 5.4W	9.1N 5.4W	5	NV	250	N	Y	19910409	121124	246	117	86	61
80	16	IVORY COAST	LAND USE PATTERNS	9.0N 5.3W	9.0N 5.3W	15	NV	250	N	Y	19910409	121126	246	117	86	61
80	17	IVORY COAST	BANDAMA BLANC RIVER	8.5N 5.5W	8.9N 5.2W	10	NV	250	N	Y	19910409	121129	246	117	86	61
80	18	IVORY COAST	BANDAMA BLANC RIVER	8.5N 5.0W	8.8N 5.0W	20	NV	250	N	Y	19910409	121132	246	117	87	61
80	19	IVORY COAST	EAST OF KOSSOU RESERVOIR	8.0N 5.0W	8.8N 4.9W	30	NV	250	N	Y	19910409	121135	246	117	87	61
80	20	IVORY COAST	NE OF KOSSOU RESERVOIR	8.0N 5.0W	8.7N 4.7W	40	NV	250	N	Y	19910409	121138	246	117	87	61
80	21	IVORY COAST	KOSSOU RESERVOIR	7.5N 5.5W	8.4N 4.2W	65	NV	250	N	Y	19910409	121148	246	117	88	61
80	22	IVORY COAST	NEAR KOSSOU RESERVOIR	8.0N 4.5W	8.1N 3.6W	60	NV	250	N	Y	19910409	121158	246	118	88	61
80	23	IVORY COAST	WEST OF KOMOE RIVER	8.0N 4.0W	8.0N 3.5W	35	NV	250	N	Y	19910409	121201	246	118	88	61
80	24	IVORY COAST	KOMOE RIVER	8.0N 4.0W	7.9N 3.3W	25	NV	250	N	Y	19910409	121204	246	118	89	61
80	25	IVORY COAST	EAST OF KOMOE RIVER	8.0N 3.5W	7.8N 3.2W	10	NV	250	N	Y	19910409	121207	246	118	89	61
80	26	IVORY COAST	EAST OF KOMOE RIVER	8.0N 3.0W	7.7N 3.0W	10	NV	250	N	Y	19910409	121210	246	119	89	61
80	27	GHANA	BUI RESERVOIR	8.5N 2.5W	7.6N 2.8W	40	NV	250	N	Y	19910409	121214	246	121	89	61
80	28	GHANA	BUI RESERVOIR	8.0N 2.5W	7.5N 2.7W	50	NV	250	N	Y	19910409	121216	246	126	89	61
80	29	GHANA	HIGHLANDS W. OF L. VOLTA	7.5N 2.5W	7.5N 2.5W	60	NV	250	N	Y	19910409	121219	246	284	89	61
80	30	GHANA	HIGHLANDS W. OF L. VOLTA	7.4N 2.4W	7.4N 2.4W	60	NV	250	N	Y	19910409	121222	246	293	89	61
80	31	GHANA	HIGHLANDS W. OF L. VOLTA	7.2N 2.1W	7.2N 2.1W	80	NV	250	N	Y	19910409	121226	246	295	89	61
80	32	GHANA	HIGHLANDS W. OF L. VOLTA	7.2N 2.0W	7.2N 2.0W	85	NV	250	N	Y	19910409	121229	246	296	89	61
80	33	GHANA	HIGHLANDS NEAR L. VOLTA	7.0N 1.8W	7.0N 1.8W	75	NV	250	N	Y	19910409	121233	246	296	89	61
80	34	GHANA	HIGHLANDS NEAR L. VOLTA	6.8N 1.3W	6.8N 1.3W	55	LO	250	N	Y	19910409	121241	246	297	88	61
80	35	GHANA	VOLTA R., KETA LAGOON	6.0N 0.5E	6.5N 0.8W	30	LO	250	N	Y	19910409	121251	246	297	87	61
80	36	TOGO	KETA LAGOON, LOME	6.0N 1.0E	6.4N 0.7W	40	NV	250	N	Y	19910409	121254	246	297	87	61
80	37	TOGO	LAKE TOGO, LOME	6.5N 1.5E	6.3N 0.4W	55	LO	250	N	Y	19910409	121259	246	297	87	61
80	38	GHANA	CITY OF ACCRA	5.5N 0.5W	6.1N 0.1W	35	LO	250	N	Y	19910409	121304	246	297	87	61
80	39	GHANA	WINNEBA, CAPE COAST	5.0N 0.5W	5.9N 0.2E	45	LO	250	N	Y	19910409	121311	246	297	86	61
80	40	GHANA	VOLTA R., SONGAW LAGOON	6.0N 0.5E	5.7N 0.6E	50	LO	250	N	Y	19910409	121318	246	297	86	61
80	41	NIGERIA	CITY OF LAGOS	6.5N 3.5E	4.7N 2.4E	65	LO	250	N	Y	19910409	121352	246	297	83	61
80	42	NIGERIA	SLAVE COAST	6.5N 3.0E	4.5N 2.7E	75	LO	250	N	Y	19910409	121358	246	297	83	61
80	43	GABON	OGOOUE R., L. ONANGUE	1.0S 10.0E	0.8N 9.0E	75	LO	250	N	Y	19910409	121558	246	298	75	61
80	44	GABON	OGOOUE R., L. ONANGUE	1.0S 9.5E	0.7N 9.2E	75	LO	250	N	Y	19910409	121602	246	298	75	61
80	45	GABON	OGOOUE R., NKOMI LAGOON	1.5S 9.0E	0.5N 9.5E	60	LO	250	N	Y	19910409	121609	246	298	75	61
80	46	GABON	OGOOUE R.	0.5S 11.0E	0.1S 10.6E	75	NV	250	N	Y	19910409	121629	246	298	73	61
80	47	GABON	OGOOUE R., L. ONANGUE	1.0S 10.5E	0.2S 10.7E	70	NV	250	N	Y	19910409	121631	246	298	73	61

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		NADIR		CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN	EL	OR
				LAT	LONG	LAT	LONG												
80	48	GABON	OGOOUE R., L. ONANGUE	1.0S	10.0E	0.3S	10.9E	65	NV	250	O	N	19910409	121634	246	298	73	61	
80	49	GABON	OGOOUE R., NKOOMI LAGOON	1.0S	9.0E	0.4S	11.1E	75	NV	250	O	N	19910409	121638	246	298	73	61	
80	50	GABON	OGOOUE R., NKOOMI LAGOON	1.5S	9.0E	0.5S	11.3E	50	NV	250	O	N	19910409	121642	246	298	73	61	
80	51	GABON	MBIA LAGOON	3.5S	11.0E	0.6S	11.4E	55	LO	250	O	N	19910409	121645	246	298	72	61	
80	52	GABON	INLAND FROM MBIA LAGOON			0.7S	11.6E	75	LO	250	O	N	19910409	121648	246	298	72	61	
80	53	GABON	NEAR THE NIARI RIVER			0.8S	11.8E	75	LO	250	O	N	19910409	121652	246	298	72	61	
80	54	CONGO	NIARI RIVER	3.5S	12.5E	0.9S	11.9E	65	LO	250	N	N	19910409	121654	246	298	72	61	
80	55	CONGO	NEAR THE NIARI RIVER			1.0S	12.1E	75	LO	250	O	N	19910409	121658	246	298	72	61	
80	56	GABON	NDOGO LAGOON	2.5S	10.0E	1.1S	12.4E	65	LO	250	N	N	19910409	121703	246	298	71	61	
80	57	GABON	NDOGO LAGOON, MBIA L.	3.0S	10.5E	1.2S	12.5E	70	NV	250	O	N	19910409	121706	246	298	71	61	
80	58	GABON	INLAND FROM MBIA LAGOON			1.4S	12.7E	70	LO	250	O	N	19910409	121710	246	298	71	61	
80	59	CONGO	INLAND FROM MBIA LAGOON			1.5S	12.9E	75	NV	250	O	N	19910409	121714	246	298	71	61	
80	60	CONGO	LAND USE PATTERNS			1.6S	13.1E	80	NV	250	O	N	19910409	121718	246	298	70	61	
80	61	CONGO	LAND USE PATTERNS			1.8S	13.4E	80	LO	250	O	N	19910409	121723	246	298	70	61	
80	62	CONGO	COAST S. OF MBIA LAGOON	4.0S	11.0E	1.9S	13.7E	60	LO	250	N	N	19910409	121728	246	298	70	61	
80	63	ZAIRE	RIVER PATTERNS			2.3S	14.3E	65	LO	250	N	N	19910409	121740	246	298	69	61	
80	64	ZAIRE	RIVER PATTERNS			2.5S	14.7E	80	LO	250	N	N	19910409	121747	246	298	68	61	
80	65	ZAIRE	RIVER PATTERNS			2.6S	14.9E	85	LO	250	N	N	19910409	121752	246	298	68	61	
80	66	ZAIRE	CONGO RIVER	2.5S	16.0E	2.8S	15.2E	65	NV	250	N	N	19910409	121758	246	298	68	61	
80	67	CONGO	LEFINI RIVER	3.0S	15.5E	2.9S	15.4E	65	NV	250	N	N	19910409	121802	246	298	67	61	
80	68	ZAIRE	CONGO, KMA RIVERS	3.0S	16.5E	3.1S	15.7E	45	LO	250	N	Y	19910409	121806	246	298	67	61	
80	69	ZAIRE	CONGO, KMA RIVERS	3.5S	16.0E	3.2S	15.9E	50	LO	250	N	Y	19910409	121810	246	298	67	61	
80	70	ZAIRE	CONGO RIVER	3.5S	16.0E	3.3S	16.0E	60	LO	250	N	Y	19910409	121813	246	298	67	61	
80	71	ZAIRE	BRAZZAVILLE, KINSHASA	4.0S	15.5E	3.4S	16.2E	45	LO	250	N	Y	19910409	121816	246	298	67	61	
80	72	ZAIRE	CONGO RIVER	5.0S	14.5E	3.7S	16.7E	50	LO	250	N	N	19910409	121826	246	298	66	61	
80	73	ANGOLA	MOUTH OF CONGO RIVER	6.0S	13.0E	3.8S	17.0E	40	HO	250	N	N	19910409	121831	246	298	66	61	
80	74	ZAIRE	CONGO, KWA RIVERS	3.5S	16.0E	4.1S	17.5E	60	LO	250	N	Y	19910409	121841	246	298	65	61	
80	75	ZAIRE	CONGO, KWA RIVERS	3.0S	16.5E	4.2S	17.6E	50	LO	250	N	Y	19910409	121843	246	298	65	61	
80	76	ZAIRE	KWA, FIMI, KWANGO RIVERS	3.0S	17.0E	4.3S	17.7E	55	LO	250	N	Y	19910409	121846	246	298	65	61	
80	77	ZAIRE	KWANGO RIVER	4.0S	17.5E	4.4S	18.0E	55	NV	250	N	Y	19910409	121850	246	298	64	61	
80	78	ZAIRE	KASAI RIVER	3.5S	18.5E	4.7S	18.5E	50	NV	250	N	N	19910409	121901	246	298	64	61	
80	79	ZAIRE	KASAI, LOANGE RIVERS	4.5S	19.5E	5.0S	19.0E	30	LO	250	N	Y	19910409	121909	246	298	63	61	
80	80	ZAIRE	KASAI RIVER	4.5S	19.5E	5.1S	19.1E	30	NV	250	N	Y	19910409	121912	246	298	63	61	
80	81	ZAIRE	AREA SOUTH OF KASAI R.	4.5S	19.0E	5.1S	19.2E	50	NV	250	N	Y	19910409	121914	246	298	63	61	
80	82	ZAIRE	KASAI, LOANGE RIVERS	4.5S	20.0E	5.4S	19.7E	15	NV	250	N	Y	19910409	121924	246	297	62	61	
80	83	ZAIRE	KASAI, SANKURU RIVERS	4.5S	20.5E	5.5S	20.0E	15	NV	250	N	Y	19910409	121928	246	297	62	61	
80	84	ZAIRE	KASAI RIVER	5.0S	21.0E	5.6S	20.1E	10	NV	250	N	Y	19910409	121931	246	297	62	61	
80	85	ZAIRE	KASAI RIVER	5.5S	21.0E	5.7S	20.2E	5	NV	250	N	Y	19910409	121933	246	297	62	61	
80	86	ZAIRE	KASAI RIVER	5.5S	21.0E	5.8S	20.4E	20	LO	250	N	Y	19910409	121936	246	297	61	61	
80	87	ZAIRE	KASAI RIVER	6.0S	21.0E	5.9S	20.5E	35	LO	250	N	Y	19910409	121939	246	297	61	61	

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	NADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
80	88	ZATRE	KASAI RIVER	6.0S 21.5E	6.0S 20.7E	70	LO	250	N	N	19910409	121943	246	297	61	61
80	89	ZATRE	LULUA RIVER	5.5S 22.0E	6.1S 21.0E	30	NV	250	N	N	19910409	121948	246	297	61	61
80	90	ZATRE	KASAI RIVER	7.5S 22.0E	6.6S 21.9E	30	LO	250	N	N	19910409	122004	246	297	60	61
80	91	NAMIBIA	ETOSHA PAN	18.0S 17.0E	8.5S 25.2E	15	HO	250	N	N	19910409	122107	246	297	58	61
80	92	ANGOLA	ETOSHA PAN	17.0S 19.0E	8.8S 25.7E	15	HO	250	N	N	19910409	122117	246	297	55	61
80	93	ANGOLA	LIUWA PLAIN	17.0S 22.0E	10.0S 27.9E	15	HO	250	N	N	19910409	122158	245	298	52	61
80	94	ZAMBIA	LIUWA PLAIN, ZAMBEZI R.	15.0S 23.0E	10.1S 28.2E	10	LO	250	N	Y	19910409	122203	245	298	52	61
80	95	ZAMBIA	LIUWA PLAIN, ZAMBEZI R.	16.5S 25.0E	10.3S 28.5E	5	LO	250	N	Y	19910409	122209	245	298	52	61
80	96	ZAMBIA	LUKANGA SWAMP	15.5S 27.0E	10.7S 29.2E	10	LO	250	N	Y	19910409	122222	245	298	51	61
80	97	ZAMBIA	LUKANGA SWAMP	16.0S 27.5E	10.8S 29.6E	5	LO	250	N	Y	19910409	122229	245	298	50	61
80	98	BOTSWANA	ZAMBEZI R., OKAVANGO S.	19.0S 22.0E	11.0S 29.9E	0	HO	250	N	N	19910409	122234	245	298	50	61
80	99	BOTSWANA	ZAMBEZI R., OKAVANGO S.	19.5S 21.5E	11.1S 30.1E	0	HO	250	N	N	19910409	122238	245	298	50	61
80	100	BOTSWANA	ZAMBEZI R., OKAVANGO S.	19.5S 24.0E	11.6S 31.0E	0	HO	250	N	N	19910409	122255	245	298	49	61
80	101	ZIMBABWE	KARIBA L., ZAMBEZI R.	19.0S 26.0E	12.0S 31.7E	5	LO	250	N	Y	19910409	122308	245	298	48	61
80	102	ZIMBABWE	KARIBA LAKE	19.0S 28.0E	12.1S 32.1E	0	LO	250	N	Y	19910409	122314	245	295	47	61
80	103	BOTSWANA	MAKARTKARI PANS	20.5S 24.5E	12.4S 32.5E	0	HO	250	N	Y	19910409	122322	245	295	47	61
80	104	ZIMBABWE	S. OF LAKE KARIBA	19.0S 28.5E	12.6S 33.0E	0	LO	250	N	Y	19910409	122332	245	295	46	61
81	1	MEXICO	PETACALCO BAY	18.0N 102.0W	16.9N 100.4W	10	NV	250	N	Y	19910405	192036	244	220	76	4
81	2	MEXICO	TEQUPA BAY, SMOKE	17.0N 101.0W	16.5N 99.6W	10	NV	250	N	Y	19910405	192051	244	224	75	4
81	3	MEXICO	ACAPULCO, RES PALO LAG.	16.5N 99.5W	16.4N 99.4W	0	NV	250	N	N	19910405	192054	244	224	75	4
81	4	MEXICO	NOLENGA LAGOON	16.0N 98.0W	16.3N 99.2W	5	NV	250	N	N	19910405	192058	244	225	75	4
81	5	MEXICO	COAST WEST OF PORT ANGEL	16.0N 97.0W	16.2N 98.9W	30	NV	250	N	Y	19910405	192102	244	228	75	4
81	6	MEXICO	SUPERIOR, INFERIOR LAG.	16.0N 95.0W	15.3N 96.9W	15	NV	250	N	N	19910405	192139	244	235	74	4
81	7	MEXICO	SAN DIEGO BAY	16.0N 96.0W	15.2N 96.8W	30	NV	250	N	Y	19910405	192143	244	236	74	4
81	8	MEXICO	PORT ANGEL	16.0N 95.0W	15.0N 96.3W	20	NV	250	N	N	19910405	192149	244	237	74	4
81	9	MEXICO	COATZACOALCOS	18.0N 94.5W	14.0N 94.3W	65	LO	250	N	N	19910405	192225	244	244	72	4
81	10	MEXICO	ANGOSTURA RESERVOIR	16.0N 92.5W	13.9N 94.0W	50	LO	250	N	N	19910405	192230	244	245	72	4
81	11	PACIFIC OCEAN	SHIP WAKES, SUNGLINT		13.6N 93.3W	5	LO	250	N	N	19910405	192242	244	247	72	4
81	12	PACIFIC OCEAN	SHIP WAKES, OIL SLICKS		13.3N 92.7W	5	LO	250	N	N	19910405	192253	244	248	71	4
81	13	MEXICO	ANGOSTURA RESERVOIR	16.0N 92.0W	12.7N 91.6W	65	LO	250	N	N	19910405	192313	244	251	70	4
81	14	HONDURAS	GULF OF FONSECA	13.0N 87.5W	11.3N 88.9W	5	NV	250	N	N	19910405	192402	243	257	68	4
81	15	NICARAGUA	MANAGUA LAKE	12.5N 86.5W	11.1N 88.6W	25	NV	250	N	Y	19910405	192409	243	258	67	4
81	16	NICARAGUA	AREA NORTH OF L. MANAGUA	13.5N 86.5W	10.9N 88.1W	65	LO	250	N	Y	19910405	192418	243	259	67	4
81	17	NICARAGUA	SAINT ELENA BAY	11.5N 86.0W	10.2N 86.9W	0	NV	250	N	Y	19910405	192440	243	261	66	4
81	18	COSTA RICA	GULF OF PAPAGAYO	10.5N 85.5W	9.9N 86.2W	0	LO	250	N	Y	19910405	192453	243	262	65	4
81	19	COSTA RICA	NICOYA PENINSULA	10.0N 85.5W	9.8N 86.1W	0	LO	250	N	Y	19910405	192455	243	263	65	4
81	20	COSTA RICA	GULF OF NICOYA	10.0N 85.0W	9.8N 86.0W	5	LO	250	N	Y	19910405	192456	243	263	65	4
81	21	COSTA RICA	NEAR SAN JOSE	10.0N 84.0W	9.3N 85.2W	70	LO	250	N	N	19910405	192511	243	264	64	4
81	22	PANAMA	CHIRIQUI BAY	9.0N 82.0W	8.8N 84.1W	30	LO	250	N	N	19910405	192531	243	266	63	4
81	23	PANAMA	CHARCO AZUL BAY	8.5N 83.0W	8.5N 83.7W	20	LO	250	N	N	19910405	192539	243	266	63	4

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		MADIR		CC	TL	FL	E	S	DATE	GMT	AL	AZ	EL	OR
				LAT	LONG	LAT	LONG										SUM	
81	24	COSTA RICA	OSA PEN., GULF OF DULCE	9.0N	83.5W	8.4N	83.5W	40	NV	250	N	N	19910405	192542	243	266	62	4
81	25	PANAMA	CLOUDS			7.3N	81.5W	85	LO	250	N	N	19910405	192620	243	269	60	4
81	26	PANAMA	CLOUDS			6.6N	80.2W	95	LO	250	N	N	19910405	192645	243	270	59	4
81	27	COLOMBIA	CLOUDS, LAND USE			3.8N	75.4W	70	LO	250	N	N	19910405	192816	243	275	54	4
81	28	BRAZIL	AMAZON BAS. THUNDERSTORM			0.1S	68.7W	95	LO	250	N	N	19910405	193025	243	278	46	4
81	29	BRAZIL	AMAZON BAS. THUNDERSTORM			0.6S	67.8W	95	LO	250	N	N	19910405	193041	243	279	45	4
81	30	BRAZIL	RIO NEGRO	0.0	67.0W	1.3S	66.7W	35	NV	250	N	N	19910405	193103	243	279	44	4
81	31	BRAZIL	RIO NEGRO	0.5S	64.5W	1.4S	66.5W	70	LO	250	N	N	19910405	193106	243	279	43	4
81	32	BRAZIL	CENTRAL AMAZON BASIN			1.8S	65.7W	65	NV	250	N	N	19910405	193121	243	280	43	4
81	33	BRAZIL	AMAZON RIVER	2.5S	66.0W	2.3S	65.0W	65	NV	250	N	N	19910405	193135	242	280	42	4
81	34	BRAZIL	AMAZON RIVER, JAPURA R.	2.5S	65.5W	2.4S	64.8W	45	NV	250	N	N	19910405	193138	242	280	42	4
81	35	BRAZIL	AMAZON RIVER, JAPURA R.	3.0S	65.0W	2.5S	64.7W	40	NV	250	N	N	19910405	193141	242	280	41	4
81	36	BRAZIL	AMAZON RIVER, PARANA CR.	3.5S	64.0W	3.1S	63.5W	40	NV	250	N	N	19910405	193203	242	280	40	4
81	37	BRAZIL	AMAZON R., TEFE LAKE	3.5S	64.5W	3.3S	63.3W	50	NV	250	N	N	19910405	193208	242	280	40	4
81	38	BRAZIL	AMAZON R., MAMIA LAKE	4.0S	63.0W	3.8S	62.3W	65	NV	250	N	N	19910405	193227	242	281	39	4
81	39	BRAZIL	MADEIRA RIVER	4.0S	59.5W	4.5S	61.2W	60	LO	250	N	Y	19910405	193247	242	281	37	4
81	40	BRAZIL	MADEIRA RIVER	4.5S	60.0W	4.5S	61.1W	55	NV	250	N	Y	19910405	193249	242	281	37	4
81	41	BRAZIL	MADEIRA RIVER	5.0S	60.0W	4.6S	61.0W	70	NV	250	N	Y	19910405	193252	242	281	37	4
81	42	BRAZIL	MADEIRA RIVER	4.5S	60.0W	4.9S	60.4W	50	NV	250	N	Y	19910405	193302	242	281	36	4
81	43	BRAZIL	MADEIRA RIVER	4.5S	59.5W	5.1S	60.2W	55	NV	250	N	Y	19910405	193307	242	281	36	4
81	44	BRAZIL	MADEIRA R., THUNDERSTORM	4.0S	59.5W	5.4S	59.6W	75	NV	250	N	N	19910405	193318	242	281	35	4
81	45	BRAZIL	THUNDERSTORMS, AMAZON B.			7.8S	55.2W	95	LO	250	N	N	19910405	193440	242	281	30	4
81	46	BRAZIL	AMAZON B. LAND USE			8.6S	53.8W	30	NV	250	N	N	19910405	193507	242	281	29	4
81	47	BRAZIL	LAND USE TAPIRAPE HILLS	10.5S	51.5W	9.9S	51.5W	15	NV	250	N	N	19910405	193550	242	281	26	4
81	48	BRAZIL	LAND USE TAPIRAPE HILLS	10.5S	51.5W	9.9S	51.4W	15	NV	250	N	Y	19910405	193552	242	281	26	4
81	49	BRAZIL	LAND USE, ARAGUAIA RIVER	10.5S	51.0W	10.0S	51.2W	15	NV	250	N	Y	19910405	193555	242	281	26	4
81	50	BRAZIL	LAND USE, ARAGUAIA RIVER	11.0S	50.5W	10.1S	51.1W	15	NV	250	N	Y	19910405	193557	242	281	26	4
81	51	BRAZIL	ISLAND OF THE BANANAL	11.0S	50.0W	10.2S	51.0W	30	NV	250	N	Y	19910405	193600	242	281	25	4
81	52	BRAZIL	ISLAND OF THE BANANAL	11.0S	50.0W	10.2S	50.8W	40	NV	250	N	Y	19910405	193602	242	281	25	4
81	53	BRAZIL	ARAGUAIA RIVER	11.0S	50.0W	10.3S	50.7W	25	NV	250	N	N	19910405	193604	242	281	25	4
81	54	BRAZIL	LAND USE NEAR ARAGUAIA R	10.5S	51.0W	10.3S	50.6W	20	LO	250	N	N	19910405	193606	242	281	25	4
81	55	BRAZIL	LAND USE TAPIRAPE HILLS	10.5S	51.5W	10.6S	50.1W	15	LO	250	N	N	19910405	193615	242	281	24	4
81	56	BRAZIL	TOCANTINS RIVER	11.5S	48.5W	11.7S	48.1W	30	LO	250	N	Y	19910405	193652	242	281	22	4
81	57	BRAZIL	TOCANTINS RIVER	12.0S	48.5W	11.7S	48.0W	10	LO	250	N	N	19910405	193655	242	281	22	4
81	58	BRAZIL	TOCANTINS RIVER, V. DARK	11.5S	48.5W	12.1S	47.3W	25	NV	250	N	N	19910405	193708	243	281	21	4
81	59	BRAZIL	E. OF TOCANTINS R., DARK	12.5S	48.0W	12.6S	46.4W	15	NV	250	N	N	19910405	193711	243	281	21	4
81	60	BRAZIL	TOCANTINS RIVER, V. DARK	13.5S	47.5W	12.9S	45.8W	10	NV	250	N	N	19910405	193724	243	281	20	4
81	61	BRAZIL	PARANA RIVER	13.0S	48.0W	13.0S	45.5W	10	LO	250	N	Y	19910405	193735	243	281	19	4
81	62	BRAZIL	PARANA, TOCANTINS RIVERS	11.5S	43.5W	13.6S	44.3W	45	LO	250	N	Y	19910405	193802	243	281	18	4
81	63	BRAZIL	SAO FRANCISCO RIVER B.															

TABLE 4-3- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	LONG	MADIR LAT	LONG	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL	OR
81	64	BRAZIL	SAO FRANCISCO RIVER B.	12.0S	43.5W	13.7S	44.2W	15	NV	250	U	Y	19910405	193804	243	281	18	4
81	65	BRAZIL	SAO FRANCISCO RIVER B.	12.5S	43.5W	13.7S	44.0W	10	NV	250	U	Y	19910405	193807	243	281	17	4
81	66	BRAZIL	SAO FRANCISCO RIVER B.	12.5S	43.5W	13.9S	43.7W	10	NV	250	U	Y	19910405	193813	243	281	17	4
81	67	BRAZIL	SAO FRANCISCO RIVER B.	12.5S	43.5W	14.0S	43.5W	10	NV	250	U	Y	19910405	193816	243	281	17	4
81	68	BRAZIL	SAO FRANCISCO RIVER B.	13.0S	43.5W	14.1S	43.3W	15	NV	250	U	Y	19910405	193819	243	281	17	4
81	69	BRAZIL	SAO FRANCISCO RIVER B.	14.0S	43.5W	14.1S	43.2W	20	NV	250	U	Y	19910405	193821	243	281	17	4
81	70	BRAZIL	SAO FRANCISCO RIVER B.	14.5S	44.0W	14.2S	43.0W	15	LO	250	U	Y	19910405	193825	243	281	16	4
81	71	BRAZIL	PINHACO HILLS	15.0S	43.0W	14.7S	42.1W	25	LO	250	U	N	19910405	193841	243	280	15	4
81	72	BRAZIL	PINHACO HILLS	15.5S	42.5W	14.7S	41.9W	35	LO	250	U	Y	19910405	193844	243	280	15	4
81	73	BRAZIL	PINHACO HILLS	16.0S	42.0W	14.8S	41.8W	15	LO	250	U	Y	19910405	193846	243	280	15	4
81	74	BRAZIL	PINHACO HILLS, CLOUDS			14.9S	41.6W	80	LO	250	N	N	19910405	193849	243	280	15	4
81	75	BRAZIL	COAST NEAR SALVADOR	13.5S	39.0W	15.9S	39.5W	5	LO	250	U	Y	19910405	193927	243	280	12	4
81	76	BRAZIL	COAST S. OF SALVADOR	14.0S	39.0W	15.9S	39.3W	15	LO	250	U	Y	19910405	193930	243	280	12	4
81	77	BRAZIL	COAST, CLOUDS			16.1S	39.0W	55	LO	250	U	N	19910405	193935	243	280	12	4
81	78	BRAZIL	COAST, CLOUDS	17.0S	39.0W	16.2S	38.7W	65	LO	250	N	N	19910405	193941	243	280	12	4
81	79	ATLANTIC OCEAN	THUNDERSTORMS			17.5S	35.8W	90	NV	250	N	N	19910405	194031	243	279	8	4
81	80	ATLANTIC OCEAN	THUNDERSTORMS			17.6S	35.5W	75	NV	250	N	N	19910405	194036	243	279	8	4
81	81	ATLANTIC OCEAN	EARTH LIMB			19.5S	31.0W	50	HO	250	U	N	19910405	194153	243	277	3	4
81	82	GALAPAGOS ISLANDS	FERNANDINA, ISABELA IS.	0.0	91.5W	0.3N	93.2W	35	LO	250	N	Y	19910405	210339	243	278	47	5
81	83	GALAPAGOS ISLANDS	FERNANDINA, ISABELA IS.	0.5S	91.5W	0.2N	93.0W	35	LO	250	N	Y	19910405	210342	243	278	47	5
81	84	GALAPAGOS ISLANDS	FERNANDINA, ISABELA IS.	0.5S	91.0W	0.1N	92.9W	30	LO	250	N	Y	19910405	210345	243	278	47	5
81	85	GALAPAGOS ISLANDS	FERNANDINA IS.	0.5S	91.0W	0.0N	92.7W	35	LO	250	N	Y	19910405	210348	243	279	47	5
81	86	GALAPAGOS ISLANDS	FERNANDINA IS.	1.0S	91.0W	0.2S	92.4W	25	NV	250	N	Y	19910405	210353	243	279	46	5
81	87	GALAPAGOS ISLANDS	SAN SALVADOR, ST. CRUZ	0.5S	90.5W	0.3S	92.2W	25	LO	250	N	Y	19910405	210357	243	279	46	5
81	88	GALAPAGOS ISLANDS	SANTA CRUZ ISLAND	0.5S	90.5W	0.4S	92.0W	20	NV	250	N	Y	19910405	210401	243	279	46	5
81	89	GALAPAGOS ISLANDS	SAN CRISTOBAL ISLAND	1.0S	89.5W	1.5S	90.1W	5	NV	250	N	N	19910405	210437	243	280	44	5
81	90	PERU	PERU COAST LOOKING SOUTH			4.0S	86.0W	65	HO	250	N	N	19910405	210557	242	281	39	5
81	91	PERU	SECHURA DESERT	6.0S	80.0W	4.1S	85.6W	60	LO	250	N	N	19910405	210603	242	281	38	5
81	92	PERU	SECHURA DESERT	5.0S	80.5W	4.8S	84.4W	65	LO	250	N	N	19910405	210626	242	281	37	5
81	93	PERU	SECHURA DESERT	6.0S	80.5W	5.0S	84.1W	35	LO	250	N	N	19910405	210632	242	281	37	5
81	94	PERU	SECHURA DESERT	6.5S	80.5W	5.2S	83.9W	20	LO	250	N	N	19910405	210637	242	281	36	5
81	95	PERU	SECHURA DESERT	5.0S	81.0W	6.3S	81.9W	40	NV	250	N	N	19910405	210714	242	281	34	5
81	96	PERU	SECHURA DESERT	6.0S	80.5W	6.4S	81.7W	5	NV	250	N	Y	19910405	210718	242	281	34	5
81	97	PERU	SECHURA DESERT	6.5S	80.5W	6.6S	81.4W	20	NV	250	N	Y	19910405	210724	242	281	33	5
81	98	PERU	COAST NEAR CHICLAYO	7.0S	80.0W	6.8S	81.0W	60	LO	250	N	N	19910405	210731	242	281	33	5
81	99	PERU	COAST NEAR PACASMAYO	7.5S	79.5W	7.4S	80.0W	65	LO	250	N	N	19910405	210750	242	282	32	5
81	100	PERU	COAST S. OF TRUJILLO	8.5S	79.0W	7.5S	79.9W	40	LO	250	N	N	19910405	210752	242	282	32	5
81	101	PERU	FERROL PENINSULA	9.0S	78.5W	7.5S	79.7W	20	LO	250	N	N	19910405	210756	242	282	31	5
81	102	PERU	COAST S. OF FERROL PEN.	9.5S	78.5W	7.6S	79.5W	50	LO	250	N	N	19910405	210759	242	282	31	5
81	103	PERU	PERU ANDES MTHS.			7.8S	79.2W	80	NV	250	N	N	19910405	210805	242	282	31	5

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		MADIR		CC	TL	FL	E	S	DATE	GMT	AL	AZ	EL	OR
				LAT	LONG	LAT	LONG											
81	104	PERU	COAST NEAR CULEBRAS	9.5S	78.0W	8.6S	77.4W	55	LO	250	N		19910405	210838	242	282	29	5
81	105	PERU	COAST NEAR HUARMEY	10.0S	78.0W	8.9S	77.2W	55	LO	250	N		19910405	210843	242	282	29	5
81	106	PERU	COAST NEAR PT. LACHAY	11.0S	77.5W	9.1S	76.7W	35	LO	250	N		19910405	210851	242	282	28	5
81	107	PERU	COAST S. OF LIMA	12.5S	76.5W	10.6S	74.1W	45	LO	250	N		19910405	210940	242	282	25	5
81	108	PERU	COAST N. OF PARACAS PEN.	13.5S	76.0W	10.6S	74.0W	30	LO	250	N		19910405	210942	242	282	25	5
82	1	LIBYA	MARZUQ SS,PIVOT IRRIG.	26.2N	13.3E	27.0N	11.5E	0	LO	250	N		19910406	091239	246	119	54	13
82	2	LIBYA	HAMADA MARZUQ,PIVOT IRR.	26.3N	12.5E	26.9N	11.7E	0	LO	250	N		19910406	091242	246	119	54	13
82	3	LIBYA	MESACH MELLET,SAND SEA	26.0N	12.0E	26.9N	11.8E	0	LO	250	N		19910406	091244	246	119	54	13
82	4	LIBYA	MESACH MELLET,SAND SEA	25.5N	11.7E	26.9N	12.2E	0	LO	250	N		19910406	091249	246	119	54	13
82	5	LIBYA	TIRERENE DUNES,PIVOT IRR	26.5N	11.8E	26.8N	12.6E	0	LO	250	N		19910406	091255	246	120	54	13
82	6	LIBYA	UBARI SS,AMBARI,PIVOT IRR	26.6N	12.2E	26.7N	12.8E	0	LO	250	N		19910406	091259	246	120	55	13
82	7	LIBYA	UBARI SAND SEA, AMBARI	27.7N	12.7E	26.7N	13.0E	0	LO	250	N		19910406	091302	246	120	55	13
82	8	LIBYA	ZELLAF DUNES,SABHAH,AFLD	27.0N	14.3E	26.6N	13.4E	0	LO	250	N		19910406	091308	246	121	55	13
82	9	LIBYA	ZELLAF DUNES, SAMNU	27.2N	14.9E	26.6N	13.7E	0	LO	250	N		19910406	091312	246	121	56	13
82	10	LIBYA	ZELLAF DUNES,TOWNS,IRRIG	27.5N	14.5E	26.6N	13.9E	0	LO	250	N		19910406	091315	246	121	56	13
82	11	LIBYA	UBARI SS,WADI SHATI	27.6N	13.7E	26.5N	14.2E	0	LO	250	N		19910406	091320	246	121	56	13
82	12	LIBYA	DOREL-GUSSA, DIKE	25.6N	16.5E	26.2N	15.8E	0	LO	250	N		19910406	091343	246	123	57	13
82	13	LIBYA	DOREL-GUSSA, DIKE	26.0N	17.0E	26.2N	15.9E	0	LO	250	N		19910406	091345	246	123	57	13
82	14	LIBYA	BLACK HARUJ	26.5N	17.5E	26.1N	16.1E	0	LO	250	N		19910406	091348	246	123	58	13
82	15	LIBYA	BLACK HARUJ	26.8N	17.1E	26.1N	16.3E	0	LO	250	N		19910406	091351	246	123	58	13
82	16	LIBYA	BLACK HARUJ	26.4N	16.9E	26.1N	16.5E	0	LO	250	N		19910406	091354	246	124	58	13
82	17	LIBYA	DOREL-GUSSA,WADI SCEBERM	26.0N	16.3E	26.0N	16.7E	0	LO	250	N		19910406	091358	246	124	58	13
82	18	LIBYA	RAMLA EL MARZUCHIA	26.2N	16.1E	26.0N	17.0E	0	LO	250	N		19910406	091402	246	124	58	13
82	19	LIBYA	BLACK HARUJ,MANDIL DEPR.	26.6N	16.8E	25.9N	17.3E	0	LO	250	N		19910406	091406	246	125	59	13
82	20	LIBYA	BLACK HARUJ	27.0N	17.0E	25.9N	17.5E	0	LO	250	N		19910406	091409	246	125	59	13
82	21	LIBYA	FARID HILLS		25.6N	18.4E		0	LO	250	N		19910406	091424	246	126	60	13
82	22	LIBYA	FARID HILLS		25.6N	18.6E		0	LO	250	N		19910406	091427	246	126	60	13
82	23	LIBYA	FARID HILLS, SAND DUNES		25.5N	19.0E		0	LO	250	N		19910406	091432	246	126	60	13
82	24	LIBYA	SAND DUNES		25.5N	19.2E		0	LO	250	N		19910406	091436	246	127	60	13
82	25	LIBYA	SAND DUNES		25.4N	19.4E		0	LO	250	N		19910406	091439	246	127	61	13
82	26	LIBYA	SAND DUNES		25.4N	19.7E		0	LO	250	N		19910406	091444	246	127	61	13
82	27	LIBYA	LIBYA DESERT, ROADS	27.0N	22.0E	25.1N	20.8E	0	LO	250	N		19910406	091500	246	129	62	13
82	28	LIBYA	LIBYA DESERT,PIVOT IRRIG	27.0N	22.4E	25.0N	21.2E	0	LO	250	N		19910406	091507	246	129	62	13
82	29	LIBYA	LIBYA DESERT,PIVOT IRRIG	26.5N	22.4E	25.0N	21.4E	0	LO	250	N		19910406	091510	246	130	62	13
82	30	LIBYA	HIGHLANDS,REBIANA SS	24.0N	22.4E	24.8N	22.1E	0	NV	250	N		19910406	091520	246	130	63	13
82	31	LIBYA	HIGHLANDS,KUFRAH OASIS	24.5N	22.6E	24.7N	22.2E	0	LO	250	N		19910406	091523	246	131	63	13
82	32	LIBYA	HIGHLANDS,KUFRAH OASIS	24.6N	23.0E	24.7N	22.5E	0	LO	250	N		19910406	091527	246	131	63	13
82	33	LIBYA	HIGHLANDS, DESERT	25.0N	23.3E	24.6N	22.8E	0	LO	250	N		19910406	091532	246	131	64	13
82	34	LIBYA	HIGHLANDS, DESERT	25.3N	23.0E	24.6N	23.0E	0	LO	250	N		19910406	091535	246	132	64	13
82	35	LIBYA	HIGHLANDS, DESERT	25.6N	23.8E	24.5N	23.3E	0	LO	250	N		19910406	091539	246	132	64	13



TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	LONG	MADIR LAT	LONG	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
82	36	LIBYA	HIGHLANDS, DESERT	25.8N	24.5E	24.4N	23.6E	0	LO	250	N	Y	19910406	091544	246	132	64	13
82	37	LIBYA	HIGHLANDS, DESERT	25.3N	24.5E	24.3N	23.9E	0	LO	250	N	Y	19910406	091549	246	133	65	13
82	38	LIBYA	HIGHLANDS, DESERT			24.2N	24.3E	0	LO	250	N	Y	19910406	091555	246	134	65	13
82	39	LIBYA	HIGHLANDS, DESERT			24.2N	24.3E	0	LO	250	N	Y	19910406	091558	246	134	65	13
82	40	LIBYA	HIGHLANDS, LIBYAN DESERT			24.1N	24.7E	0	LO	250	N	Y	19910406	091801	246	134	65	13
82	41	LIBYA	HIGHLANDS, LIBYAN DESERT			24.1N	24.8E	0	LO	250	N	Y	19910406	091803	246	134	65	13
82	42	EGYPT	HIGHLANDS, LIBYAN DESERT			24.0N	25.0E	0	LO	250	N	Y	19910406	091808	246	135	66	13
82	43	EGYPT	HIGHLANDS, LIBYAN DESERT			24.0N	25.2E	0	LO	250	N	Y	19910406	091809	246	135	66	13
82	44	EGYPT	HIGHLANDS, LIBYAN DESERT			23.9N	25.4E	0	LO	250	N	Y	19910406	091812	246	135	66	13
82	45	EGYPT	HIGHLANDS, LIBYAN DESERT			23.9N	25.6E	0	LO	250	N	Y	19910406	091815	246	135	66	13
82	46	EGYPT	HIGHLANDS, LIBYA DESERT			23.8N	25.8E	0	LO	250	N	Y	19910406	091819	246	136	66	13
82	47	EGYPT	GILF KEBIR PLAT, DESERT	24.0N	26.0E	23.7N	26.0E	0	LO	250	N	Y	19910406	091822	246	136	67	13
82	48	EGYPT	GILF KEBIR PLAT, DESERT	23.7N	26.0E	23.7N	26.2E	0	LO	250	N	Y	19910406	091825	246	137	67	13
82	49	EGYPT	GILF KEBIR PLAT, DESERT	24.0N	27.0E	23.6N	26.5E	0	LO	250	N	Y	19910406	091830	246	137	67	13
82	50	EGYPT	LIBYAN SAND SEA			23.5N	26.8E	0	LO	250	N	Y	19910406	091835	246	138	67	13
82	51	EGYPT	LIBYAN SAND SEA			23.3N	27.4E	0	LO	250	N	Y	19910406	091844	246	139	68	13
82	52	EGYPT	LIBYAN SAND SEA			23.3N	27.6E	0	LO	250	N	Y	19910406	091847	246	139	68	13
82	53	EGYPT	LIBYAN SAND SEA			23.2N	27.8E	0	LO	250	N	Y	19910406	091850	246	139	68	13
82	54	EGYPT	LIBYAN SAND SEA			23.1N	28.0E	0	LO	250	N	Y	19910406	091854	246	140	68	13
82	55	EGYPT	WESTERN DESERT			23.0N	28.6E	0	LO	250	N	Y	19910406	091703	246	141	69	13
82	56	EGYPT	WESTERN DESERT			22.9N	28.9E	0	LO	250	N	Y	19910406	091709	246	142	69	13
82	57	EGYPT	WESTERN DESERT			22.8N	29.1E	0	LO	250	N	Y	19910406	091712	246	142	69	13
82	58	EGYPT	WESTERN DESERT			22.7N	29.5E	0	LO	250	N	Y	19910406	091718	246	143	70	13
82	59	EGYPT	WESTERN DESERT			22.6N	29.8E	0	LO	250	N	Y	19910406	091723	246	143	70	13
82	60	EGYPT	WESTERN DESERT			22.5N	30.0E	0	LO	250	N	Y	19910406	091726	246	144	70	13
82	61	SUDAN	NILE RIVER, DESERT	21.5N	31.1E	22.3N	30.7E	0	NV	250	N	Y	19910406	091738	245	145	71	13
82	62	SUDAN	NILE RIVER, DESERT	21.8N	31.3E	22.2N	30.9E	0	NV	250	N	Y	19910406	091741	245	146	71	13
82	63	EGYPT	NILE RIVER, DESERT	22.1N	31.5E	22.2N	31.0E	0	NV	250	N	Y	19910406	091743	245	146	71	13
82	64	EGYPT	NILE RIVER, MASSER RES.	22.3N	31.7E	22.1N	31.2E	0	NV	250	N	Y	19910406	091746	245	146	71	13
82	65	EGYPT	NILE RIVER, MASSER RES.	22.5N	31.9E	22.1N	31.3E	0	NV	250	N	Y	19910406	091748	245	147	71	13
82	66	EGYPT	NILE RIVER, MASSER RES.	22.6N	32.1E	22.0N	31.5E	0	LO	250	N	Y	19910406	091750	245	147	71	13
82	67	EGYPT	NILE RIVER, MASSER RES.	22.7N	32.4E	22.0N	31.6E	0	LO	250	N	Y	19910406	091752	245	147	71	13
82	68	EGYPT	NILE RIVER, LAKE MASSER	22.9N	32.7E	21.9N	31.8E	10	LO	250	N	Y	19910406	091755	245	148	71	13
82	69	EGYPT	NILE RIVER, LAKE MASSER	23.1N	33.0E	21.9N	32.0E	10	LO	250	N	Y	19910406	091759	245	148	72	13
82	70	EGYPT	NUBIAN DES, WADI ALLAQI	22.6N	33.4E	21.8N	32.3E	20	LO	250	N	Y	19910406	091804	245	149	72	13
82	71	EGYPT	NUBIAN DES, WADI ALLAQI	22.2N	34.4E	21.7N	32.6E	20	LO	250	N	Y	19910406	091809	245	150	72	13
82	72	EGYPT	NUBIAN DES, WADI ALLAQI	21.5N	34.6E	21.5N	33.1E	20	LO	250	N	Y	19910406	091817	245	151	72	13
82	73	EGYPT	NUBIAN DES, WADI ALLAQI	22.1N	34.5E	21.4N	33.2E	10	LO	250	N	Y	19910406	091819	245	152	73	13
82	74	EGYPT	WADI ALLAQI, NUBIAN DES.	22.1N	35.0E	21.4N	33.4E	5	LO	250	N	Y	19910406	091821	245	152	73	13
82	75	EGYPT	MT. IS, WADI ALLAQI, DESERT	21.6N	35.3E	21.3N	33.5E	5	LO	250	N	Y	19910406	091824	245	152	73	13

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		MADIR		CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM	
				LAT	LON	LAT	LON										EL	
82	76	EGYPT	MT. JARF, NUBIAN DESERT	22.6N	34.9E	21.3N	33.8E	10	LO	250	N	Y	19910406	091828	245	153	73	
82	77	EGYPT	MT. JARF, RED SEA COAST	22.6N	35.3E	21.2N	34.0E	5	LO	250	N	Y	19910406	091832	245	154	73	
82	78	EGYPT	MT. JARF, RED SEA COAST	23.3N	35.5E	21.1N	34.3E	5	LO	250	N	Y	19910406	091837	245	155	73	
82	79	EGYPT	MT. JARF, RED SEA COAST	22.6N	35.7E	21.0N	34.5E	10	LO	250	N	Y	19910406	091840	245	155	74	
82	80	SUDAN	NUBIAN DESERT, WADI OKO	21.3N	35.4E	20.9N	34.7E	15	NV	250	N	Y	19910406	091843	245	156	74	
82	81	SUDAN	NUBIAN DESERT, WADI OKO	20.6N	35.5E	20.9N	34.9E	15	NV	250	N	Y	19910406	091846	245	156	74	
82	82	SUDAN	NUBIAN DESERT, WADI OKO	20.2N	35.8E	20.8N	35.1E	15	NV	250	N	Y	19910406	091849	245	157	74	
82	83	SUDAN	NUBIAN DES., KOLIBATAB WADI	19.7N	36.0E	20.8N	36.2E	0	LO	250	N	Y	19910406	091851	245	157	74	
82	84	SUDAN	NUBIAN DES., HAYET WADI	20.0N	36.4E	20.7N	35.4E	10	NV	250	N	Y	19910406	091855	245	158	74	
82	85	SUDAN	NUBIAN DES., YUDEB WADI	20.5N	36.3E	20.6N	35.6E	5	NV	250	N	Y	19910406	091858	245	159	74	
82	86	SUDAN	NUBIAN DES., YUDEB WADI	21.0N	36.3E	20.5N	35.8E	10	LO	250	N	Y	19910406	091902	245	160	74	
82	87	SUDAN	NUBIAN DES., DUNGUNAB BAY	21.0N	36.5E	20.4N	36.1E	15	NV	250	N	Y	19910406	091906	245	160	75	
82	88	SUDAN	COAST RANGE, MT. ERBA	20.5N	37.0E	20.4N	36.3E	30	NV	250	N	Y	19910406	091909	245	161	75	
82	89	EGYPT	COAST RANGE, PORT SUDAN	19.6N	36.7E	20.3N	36.4E	10	LO	250	N	Y	19910406	091912	245	162	75	
82	90	EGYPT	COAST RANGE, RED SEA CST	19.0N	37.0E	20.2N	36.7E	15	NV	250	N	Y	19910406	091917	245	163	75	
82	91	SAUDI ARABIA	JIDDAH, MECCA, COAST	21.5N	39.2E	19.5N	38.4E	5	LO	250	N	Y	19910406	091945	245	169	76	
82	92	SAUDI ARABIA	MECCA, RED SEA COAST	21.0N	39.8E	19.4N	38.8E	0	LO	250	N	Y	19910406	091952	245	171	76	
82	93	SAUDI ARABIA	HIJAZ MTNS, RED SEA COAST	20.6N	40.0E	19.3N	39.0E	0	LO	250	N	Y	19910406	091955	245	172	76	
82	94	SAUDI ARABIA	HIJAZ MTNS, RED SEA COAST	20.4N	40.5E	19.2N	39.2E	10	LO	250	N	Y	19910406	091958	245	173	77	
82	95	SAUDI ARABIA	HIJAZ MTNS, RED SEA COAST	19.6N	41.1E	19.1N	39.4E	15	LO	250	N	Y	19910406	092002	245	174	77	
82	96	SAUDI ARABIA	HIJAZ MTNS, AHSIBAH WADI	19.6N	41.5E	18.8N	40.3E	15	LO	250	N	Y	19910406	092017	245	178	77	
82	97	SAUDI ARABIA	HIJAZ MTNS, QANUNAH WADI	19.0N	41.8E	18.7N	40.5E	20	LO	250	N	Y	19910406	092020	245	179	77	
82	98	SAUDI ARABIA	HIJAZ MTNS, CST, OC. EDDY	17.7N	42.3E	18.2N	41.6E	10	LO	250	N	Y	19910406	092040	245	185	78	
82	99	SAUDI ARABIA	HIJAZ MTNS, WADI DAMAD	17.5N	43.0E	17.6N	43.1E	30	NV	250	N	Y	19910406	092105	245	193	78	
82	100	SAUDI ARABIA	TUMAYQ IRRIG. AREA	20.0N	45.0E	17.0N	44.6E	0	LO	250	N	Y	19910406	092131	245	201	78	
82	101	SAUDI ARABIA	BAHR AS SAFI		16.6N	45.4E	16.4N	20	LO	250	N	Y	19910406	092145	245	206	78	
82	102	SAUDI ARABIA	BAHR AS SAFI		16.4N	45.7E	16.4N	20	LO	250	N	Y	19910406	092151	245	208	78	
82	103	YEMEN (ADEN)	BAHR AS SAFI		16.4N	45.9E	16.4N	20	LO	250	N	Y	19910406	092154	245	209	78	
82	104	YEMEN (ADEN)	BAHR AS SAFI		16.3N	46.1E	16.3N	46.1E	5	LO	250	N	Y	19910406	092158	245	210	78
82	105	YEMEN (ADEN)	BAHR AS SAFI		16.2N	46.3E	16.2N	46.3E	5	LO	250	N	Y	19910406	092201	245	211	78
82	106	YEMEN (ADEN)	BAHR AS SAFI		16.1N	46.5E	16.1N	46.5E	0	LO	250	N	Y	19910406	092204	245	212	78
82	107	YEMEN (ADEN)	BAHR AS SAFI					5	LO	250	N	Y						
83	1	WESTERN SAHARA	CAP BLANC PENINSULA, CST.	21.0N	17.2W	24.3N	18.0W	25	LO	100	N	Y	19910409	102732	246	105	46	
83	2	ATLANTIC OCEAN	CLOUD EDDIES, SWIRLS		24.1N	17.5W	100	LO	100	N	Y	Y	19910409	102740	246	106	47	
83	3	ATLANTIC OCEAN	CLOUD EDDIES, SWIRLS		23.9N	16.7W	80	LO	100	N	Y	Y	19910409	102752	246	106	48	
83	4	MAURITANIA	A ZEFAL DUNE FIELD	20.5N	15.0W	23.2N	14.3W	5	LO	100	N	Y	19910409	102831	246	107	50	
83	5	MAURITANIA	RICHAT STRUCTURE	21.1N	11.4W	22.6N	12.4W	0	LO	100	N	Y	19910409	102901	246	108	52	
83	6	MAURITANIA	RICHAT STRUCTURE	21.1N	11.4W	22.5N	11.9W	0	LO	100	N	Y	19910409	102909	246	108	53	
83	7	MAURITANIA	DHAR ADRAR, RICHAT STRUCT	20.0N	12.5W	22.0N	10.5W	0	LO	100	N	Y	19910409	102932	246	109	54	
83	8	MAURITANIA	DHAR ADRAR, RICHAT STRUCT	19.5N	12.5W	21.7N	9.4W	0	LO	100	N	Y	19910409	102949	246	109	55	

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	CENTER LON	MADI LAT	MADI LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
83	9	MAURITANIA	TAMOKART DUNE FIELD	20.0N	11.0W	21.5N	8.9W	0	LO	100	N	Y	19910409	102958	246	109	56	60
83	10	MAURITANIA	TAGANT PLAT.-AOKER BASIN	18.5N	9.5W	21.3N	8.3W	0	LO	100	N	Y	19910409	103007	246	109	56	60
83	11	MAURITANIA	AOKER BASIN RIM, DEPR.	19.5N	7.5W	21.2N	8.0W	0	LO	100	N	Y	19910409	103012	246	109	57	60
83	12	MAURITANIA	IJAFENE D,KNACHICH HILLS	20.5N	6.5W	21.0N	7.6W	0	LO	100	N	Y	19910409	103020	246	110	57	60
83	13	MAURITANIA	GASRAOUAT DEPRESSION	19.0N	6.0W	20.9N	7.3W	0	LO	100	N	Y	19910409	103025	246	110	57	60
83	14	MAURITANIA	AOKER BASIN/NORTH RIM	18.0N	8.5W	20.4N	5.8W	0	LO	100	N	Y	19910409	103049	246	110	59	60
83	15	MALI	GASRAOUAT DEPR., DUNES	18.5N	5.0W	20.0N	4.7W	0	LO	100	N	Y	19910409	103107	246	111	60	60
83	16	MALI	LAL FAGUIBINE, NIGER R.	16.6N	3.7W	19.4N	3.1W	0	LO	100	N	Y	19910409	103134	246	111	62	60
83	17	MALI	NIGER R,IRIGUI AZAOUAD	18.5N	2.5W	19.1N	2.5W	0	LO	100	N	Y	19910409	103145	246	112	63	60
83	18	MALI	NIGER RIVER, NIGER	15.0N	1.0W	18.4N	0.9W	10	LO	100	N	Y	19910409	103212	246	112	64	60
83	19	MALI	NIGER R,GAO,TILENSI WADI	18.0N	0.5E	18.2N	0.3W	0	LO	100	N	Y	19910409	103223	246	112	65	60
83	20	MALI	WADI TELMSI,MT.ILEBJANE	18.0N	1.0E	18.0N	0.3E	0	LO	100	N	Y	19910409	103232	246	113	66	60
83	21	MALI	DESERT, DUST		17.3W		1.9E	0	LO	100	N	Y	19910409	103300	246	113	67	60
83	22	MALI	DESERT, DUST			16.8N	2.8E	0	LO	100	N	Y	19910409	103317	246	114	68	60
83	23	NIGERIA	ZAMFARA R,SOKOTO R,DUST	13.0N	4.8E	16.2N	4.2E	10	LO	100	N	Y	19910409	103341	246	114	70	60
83	24	NIGERIA	SOKOTO R,DUST,SOKOTO,AFD	13.0N	5.5E	15.7N	5.4E	15	LO	100	N	Y	19910409	103402	246	114	71	60
83	25	NIGERIA	WARADI WADI,ANKAWABA WADI	13.8N	7.7E	15.0N	6.8E	10	LO	100	N	Y	19910409	103426	246	115	73	60
83	26	NIGER	WADI,DUST,DESERT	13.5N	9.5E	14.2N	8.4E	15	LO	100	N	Y	19910409	103456	246	115	75	60
83	27	NIGER	TERMIT MASSIF,W. DILLIA	16.3N	11.0E	13.6N	9.8E	10	LO	100	N	Y	19910409	103520	246	116	76	60
83	28	NIGERIA	LAKE CHAD, CLOUDY, DUST	13.5N	13.5E	13.2N	10.5E	50	LO	100	N	Y	19910409	103533	246	116	77	60
83	29	NIGERIA	LAKE CHAD, CLOUDY, DUST	13.5N	13.5E	12.9N	11.1E	60	LO	100	N	Y	19910409	103544	246	116	78	60
83	30	NIGERIA	LAKE CHAD, CLOUDY, DUST	13.5N	13.5E	12.7N	11.5E	60	LO	100	N	Y	19910409	103552	246	117	78	60
83	31	NIGERIA	LAKE CHAD, CLOUDY, DUST	13.5N	13.5E	12.4N	12.1E	60	LO	100	N	Y	19910409	103603	246	117	79	60
83	32	NIGERIA	LAKE CHAD, CLOUDY, DUST	13.5N	13.5E	11.6N	13.7E	60	LO	100	N	Y	19910409	103631	246	117	81	60
83	33	ATLANTIC OCEAN	CLOSED CONVECTION CELLS		21.8N		33.6W	95	LO	100	N	Y	19910409	120310	246	108	54	61
83	34	NAMIBIA	ETOSHA PAN,RIO CUBANGO	19.0S	20.5E	7.9S	24.2E	30	HO	100	N	Y	19910409	122048	246	297	57	61
83	35	NAMIBIA	ETOSHA PAN,RIO CUBANGO	17.5S	12.0E	8.3S	24.9E	40	HO	100	N	Y	19910409	122101	246	297	56	61
83	36	NAMIBIA	ETOSHA PAN,RIO CUBANGO	18.5S	12.0E	9.3S	26.7E	20	HO	100	N	Y	19910409	122135	246	297	54	61
83	37	ANGOLA	ETOSHA PAN,RIO CUBANGO	17.5S	19.0E	9.6S	27.2E	40	HO	100	N	Y	19910409	122145	246	296	53	61
83	38	MADAGASCAR	SW PANORAMA-TR.WND CLDS		20.1S	50.0E		80	HO	100	N	Y	19910409	122828	245	290	27	61
83	39	MEXICO	DELICIAS,RIO CONCHOS	27.7N	104.7W	28.2N	105.7W	0	NV	100	N	Y	19910409	132428	244	85	7	62
83	40	MEXICO	DELICIAS,RIO CONCHOS,OK	27.6N	104.8W	28.3N	105.0W	0	NV	100	U	Y	19910409	132437	244	85	8	62
83	41	MEXICO	SRA SALSIPUEDES/DE PINO	28.4N	101.8W	28.3N	104.4W	20	LO	100	N	Y	19910409	132447	244	86	9	62
83	42	MEXICO	SRA.SALSIPUEDES/ENCANTAD	28.5N	101.6W	28.4N	102.9W	25	LO	100	N	Y	19910409	132508	244	87	10	62
83	43	LIBERIA	NE PANORAMA-COAST,DUST		2.7N	18.0W		50	HO	100	N	Y	19910409	134823	245	299	80	62
83	44	ANGOLA	COAST,ETOSHA PAN-NAMIBI	14.0S	14.0E	10.3S	4.7E	30	HO	100	N	Y	19910409	135635	245	297	52	62
83	45	ANGOLA	COAST,ETOSHA PAN-NAMIBI	17.0S	15.0E	10.4S	4.9E	10	HO	100	N	Y	19910409	135538	245	297	52	62
83	46	NAMIBIA	COAST,ETOSHA PAN,DESERT	22.0S	15.0E	10.6S	5.2E	0	HO	100	N	Y	19910409	135543	245	297	51	62
83	47	USA-CA	SOUTH 1/3 STATE, CST	34.8N	117.5W	28.5N	120.1W	15	HO	100	N	Y	19910409	150006	243	90	16	63
83	48	USA-CA	SOUTH 1/3 STATE, CST	34.5N	116.5W	28.5N	119.4W	15	HO	100	N	Y	19910409	150016	243	90	16	63

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LAT	CENTER LON LON	MAOR LAT LAT	MAOR LON LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
83	49	USA-CA	SOUTH 1/3 STATE, CST	35.5N	117.5W	28.5N	119.1W	15	HO	100	N	Y	19910409	150021	243	90	17	63
83	50	USA-CA	MID STATE PANORAMA	36.5N	118.5W	28.5N	118.3W	15	HO	100	N	Y	19910409	150032	243	91	17	63
83	51	USA-CA	MID STATE PANORAMA	36.5N	119.5W	28.5N	117.5W	15	HO	100	N	Y	19910409	150043	244	91	18	63
83	52	USA-CA	SOUTH 1/3 PANORAMA	35.0N	117.5W	28.4N	117.1W	15	HO	100	N	Y	19910409	150049	244	91	19	63
83	53	USA-CA	STATE AXIS NO. PANORAMA	34.5N	117.5W	28.2N	112.1W	10	HO	100	N	Y	19910409	150203	244	94	23	63
83	54	USA-CA	STATE AXIS NO. PANORAMA	35.0N	117.5W	28.1N	111.4W	10	HO	100	N	Y	19910409	150212	244	94	24	63
83	55	USA-UT	COLORADO PLATEAU/RIVER	37.5N	111.0W	27.9N	109.1W	10	HO	100	N	Y	19910409	150246	244	95	26	63
83	56	USA-NM	WHITE SANDS, RIO GRANDE	33.0N	103.5W	27.6N	106.2W	5	LO	100	N	Y	19910409	150330	244	97	29	63
83	57	USA-NM	WHITE SANDS, PECOS R/VAL.	33.0N	105.0W	27.4N	104.9W	5	HO	100	N	Y	19910409	150348	244	97	30	63
83	58	USA-TX	LLANO ESTACADO, RED R.	33.5N	101.5W	27.3N	104.1W	5	HO	100	N	Y	19910409	150401	244	98	31	63
83	59	USA-CO	PECOS R/VALLEY, E. ROCKIES	38.0N	106.0W	27.1N	102.9W	5	HO	100	N	Y	19910409	150418	244	98	32	63
83	60	USA-TX	LLANO ESTACADO, PERMIAN B	33.0N	101.0W	27.0N	102.1W	5	HO	100	N	Y	19910409	150431	244	99	33	63
83	61	USA-OK	RED R. CANADIAN R. PLAINS	37.0N	98.0W	26.8N	100.8W	10	HO	100	N	Y	19910409	150450	245	99	34	63
83	62	MEXICO	WEST PANORAMA, BAJA, GULF	29.0N	105.5W	26.2N	97.6W	5	HO	100	N	Y	19910409	150538	245	101	37	63
83	63	MEXICO	WEST PANORAMA, BAJA, GULF	28.0N	104.0W	26.0N	96.8W	5	HO	100	N	Y	19910409	150550	245	101	38	63
83	64	USA-TX	NW PANORAMA, WHITE SANDS	31.0N	104.0W	25.9N	96.5W	10	HO	100	N	Y	19910409	150555	245	101	38	63
83	65	MEXICO	NO. PLATEAU, SRA MADRE MTN	26.1N	101.2W	25.8N	95.9W	30	LO	100	N	Y	19910409	150604	245	101	39	63
83	66	USA-TX	NW PANORAMA, WHITE SANDS	22.0N	82.0W	4.9N	42.9W	30	LO	100	N	Y	19910409	150636	245	102	41	63
83	67	CUBA	WEST AREA, ISLE OF PINES	21.8N	79.0W	5.2N	43.9W	30	LO	100	N	Y	19910409	151103	245	108	55	63
83	68	CUBA	CENTRAL SECTION	21.8N	79.0W	5.2N	43.9W	30	LO	100	N	Y	19910409	151103	245	109	58	63
83	69	CUBA	CENTRAL SECTION	21.8N	78.6W	5.3N	44.1W	30	LO	100	N	Y	19910409	151113	245	109	59	63
83	70	CUBA	CENTRAL-EAST SECTION	20.7N	76.1W	5.6N	44.8W	30	LO	100	N	Y	19910409	151139	245	110	60	63
83	71	CUBA	EAST END	20.7N	75.0W	5.7N	45.1W	30	LO	100	N	Y	19910409	151149	245	110	61	63
83	72	DOMINICAN REPUBLIC	SW SECTION, ENRIQUILLO L.	18.5N	70.6W	6.9N	47.7W	35	LO	100	N	Y	19910409	151312	244	111	66	63
83	73	DOMINICAN REPUBLIC	EAST SECTION	18.5N	69.5W	6.9N	47.8W	50	LO	100	N	Y	19910409	151316	244	111	66	63
83	74	PUERTO RICO	ENTIRE ISLAND-CLOUDY	18.5N	66.5W	7.5N	49.2W	40	LO	100	N	Y	19910409	151400	244	112	69	63
83	75	NAMIBIA	NAMIB DES, TSAUCHAB WADI	24.8S	16.1E	22.8S	10.4E	0	LO	100	N	Y	19910409	153727	245	287	20	63
83	76	NAMIBIA	NAMIB DES, TSARISBERG	26.5S	16.0E	23.0S	10.9E	0	HO	100	N	Y	19910409	153734	245	287	19	63
83	77	NAMIBIA	NAMIB DES, COAST RANGES	24.0S	18.0E	23.1S	11.2E	0	HO	100	N	Y	19910409	153739	245	287	19	63
83	78	NAMIBIA	NAMIB DES, COAST RANGES	25.5S	18.0E	23.2S	11.5E	0	HO	100	N	Y	19910409	153744	245	287	19	63
83	79	NAMIBIA	NAMIB DES, COAST RANGES	24.5S	17.5E	23.5S	12.6E	0	LO	100	N	Y	19910409	153801	245	286	17	63
83	80	NAMIBIA	NAMIB DES, COAST RANGES	25.0S	17.5E	23.6S	12.8E	0	LO	100	N	Y	19910409	153804	245	286	17	63
83	81	NAMIBIA	NAMIB DES, COAST RANGES	26.5S	17.0E	23.7S	13.1E	0	LO	100	N	Y	19910409	153809	245	286	17	63
83	82	NAMIBIA	NAMIB DES, COAST RANGES	26.5S	18.0E	23.8S	13.5E	0	LO	100	N	Y	19910409	153816	245	286	17	63
83	83	NAMIBIA	GR. NAMALAND, MT. BRUKKAROS	25.5S	18.5E	23.9S	13.8E	0	LO	100	N	Y	19910409	153821	245	286	16	63
83	84	NAMIBIA	KALAHARI DES, DUNE FIELD	25.0S	20.0E	24.2S	14.9E	0	LO	100	N	Y	19910409	153838	245	285	15	63
83	85	BOTSWANA	KALAHARI DES, DUNE FIELD	26.5S	20.6E	24.3S	15.2E	0	LO	100	N	Y	19910409	153843	245	285	15	63
83	86	REPUBLIC SOUTH AFRICA	KALAHARI DES, SALT PANS	28.0S	20.5E	24.3S	15.5E	0	LO	100	N	Y	19910409	153847	245	285	15	63
83	87	ANGOLA	NE PANORAMA, R. CUBANGO	16.5S	19.5E	24.5S	16.2E	15	HO	100	N	Y	19910409	153859	245	285	14	63
83	88	REPUBLIC SOUTH AFRICA	KURUMAN HEWELL, LANGEBOG	28.0S	25.0E	25.3S	19.4E	0	LO	100	N	Y	19910409	153948	245	283	11	63

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		MADIR		CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN	EL	OR
				LAT	LONG	LAT	LONG												
83	89	BOTSUANA	OKAVANGO SWAMP, SALT PANS	19.8S	23.8E	25.6S	21.0E	15	HO	100	N	N	19910409	154012	245	283	9	63	
83	90	MEXICO	CLDS/FOG/SRA MADRE, CST	25.5N	100.5W	19.2N	98.2W	85	HO	100	N	N	19910409	164517	246	109	61	64	
83	91	MEXICO	YUCATAN PEN, LAG. TERMINOS	18.5N	89.5W	18.9N	97.6W	50	HO	100	N	N	19910409	164528	246	110	61	64	
83	92	MEXICO	NW PAN, CLDS/FOG/SRA MADR	28.0N	103.0W	18.8N	96.6W	90	HO	100	N	N	19910409	164544	245	110	62	64	
83	93	BRAZIL	FOLDED RIDGES, AGR.	15.5S	56.8W	9.2S	74.9W	50	LO	250	N	Y	19910409	183917	240	295	40	65	
83	94	BRAZIL	RIO CUIABA, RIDGES	15.5S	56.6W	9.2S	75.0W	50	LO	250	N	Y	19910409	183920	240	295	40	65	
83	95	BRAZIL	RIO CUIABA, CUIABA	15.7S	56.0W	9.1S	75.1W	50	LO	250	N	Y	19910409	183923	240	295	39	65	
83	96	BRAZIL	RIO CUIABA, CUIABA	16.0S	56.0W	9.1S	75.2W	40	LO	250	N	Y	19910409	183925	240	295	39	65	
83	97	BRAZIL	RIO CUIABA, SWAMP	16.1S	56.0W	9.0S	75.4W	40	LO	250	N	Y	19910409	183929	240	294	39	65	
83	98	BRAZIL	RIO CUIABA, SWAMP	16.4S	55.6W	8.9S	75.5W	50	LO	250	N	Y	19910409	183933	240	294	39	65	
83	99	BRAZIL	SWAMP, AGR.	16.3S	55.4W	8.8S	75.6W	40	LO	250	N	Y	19910409	183936	240	294	39	65	
83	100	BRAZIL	AGR. RIO SAO LOURENCO	16.0S	55.4W	8.7S	75.8W	40	LO	250	N	Y	19910409	183940	240	294	38	65	
83	101	BRAZIL	ROMONOPOLIS, R. LOURENCO	16.4S	54.6W	8.6S	76.0W	50	LO	250	N	Y	19910409	183946	240	294	38	65	
83	102	BRAZIL	RIO SAO LOURENCO, AGR.	16.1S	54.2W	8.5S	76.1W	50	LO	250	N	Y	19910409	183949	240	294	38	65	
83	103	BRAZIL	AGRICULTURE			8.4S	76.3W	60	LO	250	N	Y	19910409	183955	240	294	37	65	
83	104	BRAZIL	AGRICULTURE			8.3S	76.5W	60	LO	250	N	Y	19910409	184000	240	294	37	65	
83	105	BRAZIL	AGRICULTURE			8.2S	76.7W	50	LO	250	N	N	19910409	184005	240	294	37	65	
83	106	BRAZIL	AGRICULTURE			8.1S	76.9W	50	LO	250	N	N	19910409	184011	240	294	36	65	
83	107	BRAZIL	AGRICULTURE			8.0S	77.1W	40	LO	250	N	N	19910409	184016	240	294	36	65	
84	1	ETHIOPIA	BLUE NILE, GUNA PEAK	11.5N	38.0E			5	NV	250	N	N							
84	2	ETHIOPIA	LAKE TANA	12.0N	37.0E			10	LO	250	N	Y							
84	3	ETHIOPIA	LAKE TANA	12.0N	37.5E			5	LO	250	N	Y							
84	4	ETHIOPIA	AWASH RIVER	11.0N	40.0E			0	NV	250	N	Y							
84	5	ETHIOPIA	AWASH RIVER, L. YARDI	10.5N	40.5E			0	NV	250	N	Y							
84	6	ETHIOPIA	AWASH RIVER, L. YARDI	10.0N	40.5E			0	NV	250	U	Y							
84	7	ETHIOPIA	AWASH RIVER, L. YARDI	10.0N	40.0E			0	NV	250	N	Y							
84	8	ETHIOPIA	AWASH RIVER, L. YARDI	9.5N	40.5E			10	NV	250	N	Y							
84	9	ETHIOPIA	AWASH RIVER, RIFT VALLEY	9.0N	40.0E			15	NV	250	N	Y							
84	10	SOMALIA	GULF OF TADJURA	11.5N	43.5E			20	LO	250	N	N							
84	11	SOMALIA	COAST, GULF OF ADEN	10.5N	44.0E			20	LO	250	N	Y							
84	12	SOMALIA	COAST NEAR BERBERA	10.5N	45.0E			35	LO	250	N	Y							
84	13	SOMALIA	COAST NEAR CHELIOT HILLS	7.5N	48.5E			35	HO	250	N	Y							
84	14	SOMALIA	COAST NEAR CHELIOT HILLS	7.0N	47.0E			30	HO	250	N	Y							
84	15	SOMALIA	COAST, INTERNAL WAVES	6.0N	47.0E			35	HO	250	N	Y							
84	16	SOMALIA	COAST, INTERNAL WAVES	5.0N	47.0E			35	LO	250	N	Y							
84	17	SOMALIA	COAST	4.5N	47.0E			40	LO	250	N	Y							
84	18	SOMALIA	COAST, VERY DARK	4.0N	48.5E			15	LO	250	U	N							
84	19	MAURITANIA	MALICHIGDANE DUNES	20.0N	14.5W			0	LO	250	N	Y							
84	20	MAURITANIA	NEAR VILLAGE OF ATAR	20.0N	13.5W			0	LO	250	U	Y							
84	21	MAURITANIA	NEAR VILLAGE OF ATAR	20.5N	13.0W			0	LO	250	U	Y							

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	NADIR LAT LON	CC	TL	FL	ES	DATE	GMT	AL	AZ	SUN EL	OR
84	22	MAURITANIA	AROUBA DUNES NEAR ATAR	21.0N 13.0W		0	LO	250	N Y						
84	23	MAURITANIA	KHZEMA DUNES	21.0N 13.5W		0	LO	250	N Y						
84	24	MAURITANIA	KHZEMA DUNES	21.0N 14.0W		0	LO	250	N Y						
84	25	MAURITANIA	KHZEMA DUNES	20.5N 14.5W		0	LO	250	N Y						
84	26	MAURITANIA	RICHAT STRUCTURE	21.0N 11.5W		0	NV	250	N Y						
84	27	MAURITANIA	RICHAT STRUCTURE	21.0N 11.5W		0	NV	250	N Y						
84	28	MAURITANIA	D'ALAFIA DUNES	22.0N 11.5W		0	LO	250	N Y						
84	29	MAURITANIA	CLIFFS, SAND DUNES	18.5N 10.5W		0	LO	250	N Y						
84	30	MAURITANIA	CLIFFS, SAND DUNES	18.5N 9.5W		0	LO	250	N Y						
84	31	MAURITANIA	CLIFFS, SAND DUNES	18.5N 8.5W		0	LO	250	N Y						
84	32	MAURITANIA	CLIFFS, SAND DUNES	17.5N 7.5W		0	LO	250	N Y						
84	33	MAURITANIA	NEMA CLIFF, SAND DUNES	17.0N 7.0W		0	LO	250	N Y						
84	34	MAURITANIA	NEMA CLIFFS, SAND DUNES	16.0N 6.5W		0	LO	250	N Y						
84	35	MALI	NIGER RIVER, SAND DUNES	17.0N 2.0W		0	NV	250	N Y						
84	36	MALI	NIGER RIVER, SAND DUNES	17.0N 1.0W		0	NV	250	N Y						
84	37	MALI	NIGER RIVER, SAND DUNES	16.5N 0.0		0	LO	250	N Y						
84	38	MALI	ESCARPMENTS N. OF NIGER	18.5N 0.5E		0	LO	250	N N						
84	39	MALI	ILEBJANE ESCARPMENT	18.5N 1.0E		0	LO	250	N N						
84	40	MALI	SAKAREZOU, TAKADAKOU MTS	16.5N 3.5E		0	LO	250	N N						
84	41	NIGER	NEAR TOWN OF TAHOUA	15.0N 5.5E		0	LO	250	N N						
84	42	NIGERIA	RIMA RIVER N. OF SOKOTO	13.5N 5.5E		15	LO	250	N N						
84	43	NIGERIA	NEAR VILLAGE OF ISA	13.5N 6.5E		5	LO	250	N N						
84	44	NIGERIA	WEST OF LAKE CHAD	11.5N 11.0E		10	LO	250	N N						
84	45	NIGER	MASSIF DE TERMIT	16.5N 11.5E		0	LO	250	N N						
84	46	NIGERIA	LAKE CHAD, SOUTH BASIN	13.0N 14.0E		5	LO	250	N Y						
84	47	CHAD	LAKE CHAD, SOUTH BASIN	13.0N 15.0E		5	LO	250	N Y						
84	48	CHAD	THE BIR LOUR PLATEAU	14.0N 15.0E		15	LO	250	N Y						
84	49	CHAD	LAKE CHAD, NORTH BASIN	14.0N 14.0E		10	LO	250	N N						
84	50	NIGER	LAKE CHAD, NORTH BASIN	13.5N 13.0E		10	LO	250	N Y						
84	51	NIGERIA	LAKE CHAD, MAIDUGURI	13.0N 13.0E		15	LO	250	N N						
84	52	NIGERIA	CHARI R. LOWLANDS	12.0N 14.5E		5	LO	250	N N						
84	53	CAMEROON	CHARI R. LOWLANDS	11.5N 15.0E		15	NV	250	N N						
84	54	CAMEROON	CHARI R. LOWLANDS	12.0N 15.0E		15	NV	250	N N						
84	55	CHAD	CHARI RIVER	11.5N 15.5E		10	LO	250	N N						
84	56	CHAD	CHARI RIVER	11.0N 15.5E		5	LO	250	N Y						
84	57	CHAD	CHARI RIVER, HAZE	11.5N 15.5E		50	LO	250	N N						
84	58	CHAD	CHARI RIVER, HAZE	10.5N 16.5E		50	LO	250	N N						
84	59	CHAD	CHARI RIVER, HAZE	10.0N 17.5E		40	LO	250	N N						
84	60	SENEGAL	DAKAR	14.5N 17.5W		0	NV	250	N Y						
84	61	SENEGAL	DAKAR	14.5N 17.5W		0	NV	250	N Y						

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	NADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
84	62	SENEGAL	DAKAR	14.5N 17.0W		0	NV	250	N	Y						
84	63	SENEGAL	SADUM RIVER	14.0N 17.0W		0	LO	250	N	Y						
84	64	SENEGAL	SADUM, GAMBIA RIVERS	13.5N 16.5W		0	LO	250	N	Y						
84	65	GAMBIA	GAMBIA RIVER	13.5N 16.5W		0	LO	250	N	Y						
84	66	SENEGAL	GAMBIA, CASAMANCE RIVERS	12.5N 16.5W		5	LO	250	N	Y						
84	67	SENEGAL	CAHEU, CASAMANCE RIVERS	12.5N 16.0W		5	LO	250	N	Y						
84	68	GUINEA BISSAU	CAHEU, MANSOA RIVERS	12.0N 16.0W		0	LO	250	N	Y						
84	69	GUINEA BISSAU	GEBA RIVER	12.0N 15.5W		0	LO	250	N	Y						
84	70	SENEGAL	CASAMANCE RIVER	12.5N 15.5W		0	LO	250	N	Y						
84	71	SENEGAL	GAMBIA RIVER	13.0N 15.5W		0	LO	250	N	Y						
84	72	SENEGAL	GAMBIA, SALOUM RIVERS	14.0N 15.5W		0	LO	250	N	Y						
84	73	SENEGAL	GAMBIA RIVER	14.0N 15.0W		0	LO	250	N	Y						
84	74	SENEGAL	GAMBIA RIVER	14.0N 14.5W		0	NV	250	N	Y						
84	75	SENEGAL	GAMBIA RIVER	13.5N 14.5W		0	NV	250	N	Y						
84	76	SENEGAL	GAMBIA, KAYANGE RIVERS	13.0N 14.5W		0	NV	250	N	Y						
84	77	GUINEA BISSAU	CASAMANCE, GEBA RIVERS	12.5N 15.0W		0	NV	250	N	Y						
84	78	GUINEA BISSAU	GEBA, CORUBAL RIVERS	12.5N 14.5W		0	NV	250	N	Y						
84	79	GUINEA	KOULONTOU, CORUBAL R.	12.5N 13.5W		0	NV	250	N	Y						
84	80	SENEGAL	GAMBIA RIVER	13.5N 13.5W		0	LO	250	N	Y						
84	81	SENEGAL	GAMBIA RIVER	13.0N 13.5W		0	LO	250	N	Y						
84	82	SENEGAL	GAMBIA RIVER	13.0N 13.0W		0	NV	250	N	Y						
84	83	SENEGAL	GAMBIA RIVER	13.0N 12.5W		0	NV	250	N	Y						
84	84	GUINEA	GAMBIA RIVER	12.5N 13.0W		0	LO	250	N	Y						
84	85	GUINEA	TOMINE RIVER	12.0N 13.5W		0	NV	250	N	Y						
84	86	GUINEA	TOMINE, KOMBE RIVERS	11.5N 13.0W		0	NV	250	N	Y						
84	87	GUINEA	LOMA HILLS, KOMBE RIVER	11.5N 13.0W		0	NV	250	N	Y						
84	88	GUINEA	LOMA HILLS, KOMBE RIVER	11.5N 12.5W		0	NV	250	N	Y						
84	89	GUINEA	LOMA HILLS, TOMINE R.	11.5N 13.5W		0	NV	250	N	Y						
84	90	GUINEA	LOMA HILLS	11.0N 13.0W		0	NV	250	N	Y						
84	91	GUINEA	LOMA HILLS	11.5N 12.5W		0	NV	250	N	Y						
84	92	MALI	BAFING RIVER RESERVOIR	13.0N 10.5W		0	LO	250	N	Y						
84	93	MALI	BAFING RIVER	13.5N 11.0W		0	LO	250	N	Y						
84	94	MALI	BAFING RIVER	12.5N 10.5W		0	LO	250	N	Y						
84	95	GUINEA	BAFING RIVER	12.0N 10.5W		0	LO	250	N	Y						
84	96	GUINEA	BAFING RIVER	11.5N 11.0W		0	LO	250	N	Y						
84	97	GUINEA	BAFING RIVER, LOMA HILLS	11.5N 10.5W		0	LO	250	N	Y						
84	98	GUINEA	BAFING RIVER, LOMA HILLS			0	LO	250	N	Y						
84	99	GUINEA	BAFING RIVER, LOMA HILLS	12.0N 10.5W		0	LO	250	N	Y						
84	100	GUINEA	TINKISSI RIVER	11.5N 10.5W		0	LO	250	N	Y						
84	101	GUINEA	TINKISSI RIVER	11.0N 10.0W		0	LO	250	N	Y						

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		MADIR		CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN
				LAT	LO	LAT	LO										EL
84	102	GUINEA	NIGER RIVER	11.0N	9.5W			0	LO	250	N	Y					
84	103	GUINEA	NIGER RIVER	10.5N	9.5W			0	LO	250	N	Y					
84	104	GUINEA	NIGER RIVER	10.5N	10.0W			0	LO	250	N	Y					
85	1	MEXICO	S.MEX., OAXACA AREA	17.0N	97.4W	17.7N	96.7W	0	LO	250	N	N	19910408	172501	247	122	71
85	2	MEXICO	S.MEX., OAXACA AREA	16.3N	96.7W	17.6N	96.4W	0	LO	250	N	N	19910408	172506	247	122	71
85	3	MEXICO	COAST, SSE OAXACA AREA	16.2N	96.3W	17.4N	95.8W	10	LO	250	N	N	19910408	172515	247	122	72
85	4	MEXICO	COAST, W. OF PUERTO ESCONO	16.2N	97.5W	17.1N	95.3W	10	LO	250	N	N	19910408	172525	247	123	72
85	5	MEXICO	MAR MUERTO	16.0N	94.0W	16.9N	94.8W	10	LO	250	N	N	19910408	172534	247	123	73
85	6	MEXICO	HEADWATER, RIO ENCAJONADO	16.7N	94.2W	16.5N	93.7W	0	LO	250	N	N	19910408	172552	247	125	74
85	7	MEXICO	PRESA DE LA ANGOSTURA	16.0N	92.5W	16.2N	93.2W	10	LO	250	N	N	19910408	172602	247	125	75
85	8	MEXICO	S.MEX., INLAND			15.6N	91.9W	40	LO	250	N	N	19910408	172624	246	127	76
85	9	EL SALVADOR	COAST WETLANDS, SE SAN SA	13.2N	88.7W	14.6N	89.8W	40	LO	250	N	N	19910408	172702	246	130	78
85	10	EL SALVADOR	GULF OF FONSECA, SUNGLINT	13.3N	87.6W	14.0N	88.6W	0	LO	250	N	N	19910408	172723	246	133	80
85	11	NICARAGUA	GULF OF FONSECA, SUNGLINT	12.8N	87.1W	13.9N	88.2W	5	LO	250	N	N	19910408	172730	246	134	80
85	12	NICARAGUA	GULF OF FONSECA, SUNGLINT	13.1N	87.4W	13.5N	87.5W	0	LO	250	N	N	19910408	172743	246	135	81
85	13	NICARAGUA	LAGO DE MANAGUA	12.2N	86.2W	13.3N	87.0W	30	LO	250	N	N	19910408	172752	246	137	81
85	14	COSTA RICA	CORDILLERA DE GUANACASTE	10.8N	85.3W	11.3N	83.2W	20	LO	250	N	N	19910408	172902	246	161	85
85	15	PANAMA	COLON, PANAMA CANAL	9.5N	79.9W	10.0N	80.8W	60	LO	250	N	N	19910408	172946	246	202	86
85	16	PANAMA	ISTHMUS OF PANAMA	9.3N	79.8W	9.9N	80.6W	60	LO	250	N	N	19910408	172950	246	207	86
85	17	PANAMA	COLON, CANAL	9.4N	79.8W	9.6N	80.0W	60	LO	250	N	N	19910408	173000	246	219	86
85	18	PANAMA	PANAMA CITY, CANAL	9.0N	79.6W	9.5N	79.9W	70	LO	250	N	N	19910408	173003	246	222	86
85	19		VRY CLDY, HAZY			6.2N	73.9W	99	LO	250	N	N	19910408	173155	246	277	81
85	20		VRY CLDY, HAZY, T-STORM			4.1N	70.1W	99	LO	250	N	N	19910408	173307	245	284	76
85	21	BRAZIL	AMAZON BASIN, E. MANAUS			2.7S	58.5W	90	LO	250	N	N	19910408	173649	245	291	62
85	22	BRAZIL	AMAZON BASIN, E. MANAUS			2.8S	58.4W	80	LO	250	N	N	19910408	173651	245	291	62
85	23	BRAZIL	AMAZON BASIN, E. MANAUS			2.9S	58.2W	80	LO	250	N	N	19910408	173655	245	291	62
85	24	BRAZIL	AMAZON R. JUNCTION TAPAJO	2.7S	55.0W	5.0S	54.5W	80	LO	250	N	N	19910408	173805	245	292	58
85	25	BRAZIL	AMAZON R. JUNCTION TAPAJO	2.3S	54.8W	5.2S	54.3W	80	LO	250	N	N	19910408	173810	245	292	57
85	26	BRAZIL	AMAZON R. JUNCTION TAPAJO	2.3S	54.8W	5.3S	54.0W	80	LO	250	N	N	19910408	173816	245	292	57
85	27	BRAZIL	AMAZON RIVER, E. MANAUS			6.1S	52.7W	90	LO	250	N	N	19910408	173841	245	292	55
85	28	BRAZIL	COAST, CANAMU AREA	14.0S	39.2W	14.0S	37.7W	80	LO	250	N	N	19910408	174317	245	291	38
85	29	BRAZIL	COAST, BELMONTE AREA	15.9S	39.0W	14.3S	37.1W	70	LO	250	N	N	19910408	174328	245	291	37
85	30	ARGENTINA	MTNS, BORDER W/BOLIVIA			23.2S	62.1W	50	LO	250	N	N	19910408	205649	245	284	13
85	31		CLOUDS, UNDEREXPOSED			26.3S	49.4W	100	LO	250	N	N	19910408	210007	244	278	1
85	32		CLOUDS, UNDEREXPOSED			26.3S	49.1W	100	LO	250	N	N	19910408	210011	244	278	0
85	33	PHILIPPINE SEA	UNDER EXPOSED, SUNGLINT			26.4N	139.8E	50	LO	250	N	N	19910408	233115	246	103	40
85	34	GILBERT ISLANDS	CHRISTMAS IS.	2.0N	157.4W	0.3S	158.1W	60	LO	250	N	N	19910408	234916	245	292	69
85	35	PACIFIC OCEAN	NO OBVIOUS FEATURES			1.8S	155.6W	5	LO	250	N	N	19910408	235004	245	293	66
85	36	PACIFIC OCEAN	NO OBVIOUS FEATURES			2.3S	154.6W	10	LO	250	N	N	19910408	235023	245	293	65
85	37	LINE ISLANDS	MALDEN IS.	4.0S	154.9W	3.3S	153.0W	5	LO	250	N	N	19910408	235054	245	293	63



TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	NADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
85	38	MARQUESAS ISLANDS		9.0S 140.0W	9.9S 141.2W	40	LO	250	N	N	19910408	235437	245	293	49	53
85	39	MARQUESAS ISLANDS			10.3S 140.6W	40	LO	250	N	N	19910408	235449	245	293	48	53
85	40	PACIFIC OCEAN			12.8S 135.8W	40	LO	250	N	N	19910408	235617	245	292	42	53
85	41	PACIFIC OCEAN	NO OBVIOUS WATER FEATURES		14.4S 132.4W	20	LO	250	N	N	19910408	235718	245	292	39	53
85	42	PACIFIC OCEAN	NO OBVIOUS WATER FEATURES		17.9S 124.6W	50	LO	250	N	N	19910408	235934	245	290	30	53
85	43	PACIFIC OCEAN	NO OBVIOUS WATER FEATURES		18.0S 124.4W	40	LO	250	N	N	19910408	235938	245	290	30	53
85	44	PACIFIC OCEAN	OVEREXPOSED		21.7S 114.5W	30	LO	250	N	N	19910409	000224	245	286	19	53
85	45	ATMOSPHERIC LIMB			20.9N 51.1E	LO	250	N	N	N	19910409	004822	242	72	-22	54
85	46	ATMOSPHERIC LIMB			21.1N 51.4E	LO	250	N	N	N	19910409	004828	242	72	-21	54
85	47	ATMOSPHERIC LIMB			21.1N 51.6E	LO	250	N	N	N	19910409	004831	242	72	-21	54
85	48		CLOUDS		18.7N 46.3E	99	HO	250	N	N	19910409	072513	246	113	65	58
85	49		CLOUDS		18.0N 47.9E	99	HO	250	N	N	19910409	072540	246	114	66	58
85	50	YEMEN (ADEN)	COAST, SUNGLINT	16.2N 52.5E	16.5N 51.3E	0	LO	250	N	N	19910409	072639	246	115	70	58
85	51	YEMEN (ADEN)	COAST, SUNGLINT	16.2N 52.5E	16.3N 51.7E	0	LO	250	N	N	19910409	072647	246	116	71	58
85	52	SOCOTRA		12.5N 54.0E	15.7N 53.1E	30	LO	250	N	N	19910409	072712	246	116	72	58
85	53	ARABIAN SEA	SHIP WAKE, OIL SLICK		14.8N 55.0E	0	LO	250	N	N	19910409	072745	246	117	74	58
85	54	ARABIAN SEA	SUNGLINT, CLOUDS		13.5N 57.8E	40	LO	250	N	N	19910409	072835	246	119	78	58
85	55	ARABIAN SEA	SUNGLINT, CLOUDS		12.9N 58.9E	20	LO	250	N	N	19910409	072856	246	119	79	58
85	56	ALGERIA	IGUIDI DESERT		27.0N 6.8W	0	LO	250	N	N	19910409	085052	246	100	34	59
85	57	ALGERIA	ERG CHECH, LONG DUNES		26.4N 3.3W	0	LO	250	N	N	19910409	085145	246	101	38	59
85	58	ALGERIA	ERG CHECH, LONG DUNES		26.2N 2.5W	0	LO	250	N	N	19910409	085157	246	102	39	59
85	59	ALGERIA	ERG CHECH, LONG DUNES		26.0N 1.6W	0	LO	250	N	N	19910409	085211	246	102	39	59
85	60	ALGERIA	TANEZROUFT, OASIS		25.8N 0.2W	0	LO	250	N	N	19910409	085232	246	103	41	59
85	61	ALGERIA	AHAGGAR MTNS. HAZY		25.6N 0.7E	0	LO	250	N	N	19910409	085246	246	103	42	59
85	62	ALGERIA	AHAGGAR MTNS. HAZY		25.2N 2.2E	0	LO	250	N	N	19910409	085310	246	104	43	59
85	63	ALGERIA	AHAGGAR MTNS. HAZY		25.0N 3.1E	0	LO	250	N	N	19910409	085323	246	104	44	59
85	64	ALGERIA	AHAGGAR MTNS.		24.7N 4.3E	0	LO	250	N	N	19910409	085342	246	105	45	59
85	65	ALGERIA	AHAGGAR MTNS.		24.5N 4.9E	0	LO	250	N	N	19910409	085352	246	105	46	59
85	66	ALGERIA	AHAGGAR MTNS.		24.2N 6.0E	0	LO	250	N	N	19910409	085409	246	106	47	59
85	67	ALGERIA	TENERE DESERT AREA		23.6N 8.5E	0	LO	250	N	N	19910409	085448	246	107	49	59
85	68	NIGER	TCHIGAI PLAT. AREA		23.3N 9.3E	0	LO	250	N	N	19910409	085501	246	107	50	59
85	69	NIGER	TCHIGAI AREA, WIND STRKS		22.5N 11.8E	0	LO	250	N	N	19910409	085541	246	108	53	59
85	70	NIGER	TCHIGAI AREA, WIND STRKS		22.2N 12.7E	0	LO	250	N	N	19910409	085556	246	109	54	59
85	71	NIGER	TCHIGAI AREA, WIND STRKS		22.0N 13.4E	0	LO	250	N	N	19910409	085607	246	109	55	59
85	72	NIGER	TCHIGAI AREA, WIND STRKS		21.8N 14.1E	0	LO	250	N	N	19910409	085619	246	109	55	59
85	73	NIGER	TCHIGAI AREA, WIND STRKS		21.5N 14.9E	0	LO	250	N	N	19910409	085632	246	110	56	59
85	74	CHAD	TIBESTI, PIC TOUSIDE	21.0N 16.0E	21.1N 15.9E	0	LO	250	N	N	19910409	085649	246	110	57	59
85	75	CHAD	TIBESTI, PIC TOUSIDE	21.0N 17.0E	21.0N 16.4E	0	LO	250	N	N	19910409	085656	246	110	58	59
85	76	CHAD	TIBESTI MTNS.	20.9N 16.7E	20.9N 16.7E	0	LO	250	N	N	19910409	085702	246	110	58	59
85	77	CHAD	TIBESTI MTNS.	20.5N 19.0E	20.8N 17.0E	0	LO	250	N	N	19910409	085707	246	110	58	59

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		NADIR		CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN	EL	OR
				LAT	LONG	LAT	LONG												
85	78	CHAD	TIBESTI MTNS.	20.5N	19.2E	20.6N	17.4E	0	LO	250	N	N	19910409	085713	246	111	59	59	59
85	79	CHAD	TIBESTI MTNS.	20.6N	18.7E	20.5N	17.8E	0	LO	250	N	N	19910409	085720	246	111	59	59	59
85	80	CHAD	TIBESTI,EMI KOUSSI	19.8N	18.5E	20.3N	18.2E	0	LO	250	N	N	19910409	085727	246	111	60	59	59
85	81	CHAD	TIBESTI,EMI KOUSSI	19.3N	18.8E	20.1N	18.9E	0	LO	250	N	N	19910409	085738	246	111	60	59	59
85	82	CHAD	AREA BTN TIBESTI-ENNEDI			19.9N	19.2E	0	LO	250	N	N	19910409	085744	246	111	61	59	59
85	83	CHAD	AREA BTN TIBESTI-ENNEDI			19.4N	20.5E	0	LO	250	N	N	19910409	085806	246	112	62	59	59
85	84	CHAD	AREA BTN TIBESTI-ENNEDI			19.3N	21.0E	0	LO	250	N	N	19910409	085813	246	112	63	59	59
85	85	CHAD	AREA BTN TIBESTI-ENNEDI			19.0N	21.5E	0	LO	250	N	N	19910409	085822	246	112	63	59	59
85	86	CHAD	AREA BTN TIBESTI-ENNEDI			18.9N	21.8E	0	LO	250	N	N	19910409	085827	246	112	63	59	59
85	87	CHAD	SW,ENNEDI PLATEAU AREA	16.8N	22.0E	18.8N	22.1E	0	LO	250	N	N	19910409	085832	246	113	64	59	59
85	88	CHAD	ENNEDI PLATEAU AREA			18.5N	22.8E	0	LO	250	N	N	19910409	085845	246	113	65	59	59
85	89	CHAD	ENNEDI PLATEAU AREA			18.3N	23.4E	0	LO	250	N	N	19910409	085855	246	113	65	59	59
85	90	SUDAN	SAND DESERT			17.6N	25.0E	0	LO	250	N	N	19910409	085923	246	114	67	59	59
85	91	SUDAN	SAND DESERT			17.4N	25.4E	0	LO	250	N	N	19910409	085930	246	114	68	59	59
85	92	SUDAN	SAND DESERT			17.0N	26.3E	0	LO	250	N	N	19910409	085945	246	114	68	59	59
85	93	SUDAN	SAND DESERT			16.8N	26.7E	0	LO	250	N	N	19910409	085952	246	114	69	59	59
85	94	SUDAN	DARK ROCK OUTCROP AREA			16.7N	27.1E	5	LO	250	N	N	19910409	085959	246	114	69	59	59
85	95	SUDAN	DARK ROCK OUTCROP AREA			16.5N	27.6E	0	LO	250	N	N	19910409	090007	246	115	70	59	59
85	96	SUDAN	CULTIVATED WADI			16.1N	28.3E	5	LO	250	N	N	19910409	090020	246	115	71	59	59
85	97	SUDAN	CULTIVATED WADI			16.0N	28.5E	10	LO	250	N	N	19910409	090024	246	115	71	59	59
85	98	SUDAN	HAZY,CLOY			15.6N	29.5E	60	LO	250	N	N	19910409	090041	246	115	72	59	59
85	99	SUDAN	SAND DESERT			14.8N	31.1E	50	LO	250	N	N	19910409	090110	246	116	74	59	59
85	100	SUDAN	WHITE NILE,IRR.AGRICULT.	14.0N	32.4E	14.8N	31.5E	20	LO	250	N	N	19910409	090117	246	116	74	59	59
85	101	SUDAN	WHITE NILE,IRR.AGRICULT.	14.3N	32.8E	14.3N	32.2E	10	LO	250	N	N	19910409	090129	246	117	75	59	59
85	102	SUDAN	WHITE NILE,IRR.AGRICULT.	14.5N	32.8E	14.0N	32.7E	10	LO	250	N	N	19910409	090138	246	117	76	59	59
85	103	SUDAN	WHITE NILE,IRR.AGRICULT.	13.8N	32.8E	13.9N	33.0E	0	LO	250	N	N	19910409	090143	246	117	76	59	59
85	104	SUDAN	BLUE NILE,IRR.AGRICULT.	13.0N	34.0E	13.7N	33.4E	0	LO	250	N	N	19910409	090150	246	117	76	59	59
85	105	SUDAN	BLUE NILE,IRR.AGRICULT.	13.0N	34.0E	13.6N	33.6E	0	LO	250	N	N	19910409	090154	246	117	77	59	59
85	106	SUDAN	BLUE NILE,IRR.AGRICULT.	13.0N	34.0E	13.5N	33.9E	0	LO	250	N	N	19910409	090159	246	117	77	59	59
86	1	NIGER	DALLOL BOSSO, SAND STORM	16.0N	4.0E	15.5N	3.9E	0	LO	250	N	N	19910408	111237	246	134	78	45	45
86	2	NIGER	DALLOL BOSSO, SAND STORM			15.4N	4.0E	0	LO	250	N	N	19910408	111240	246	134	78	45	45
86	3	NIGER	DALLOL BOSSO, SAND STORM			15.4N	4.2E	0	LO	250	N	N	19910408	111242	246	134	78	45	45
86	4	NIGER	DALLOL BOSSO, SAND STORM			15.3N	4.3E	0	LO	250	N	N	19910408	111244	246	135	78	45	45
86	5	NIGER	W. NIGER,SANDSTORM			15.3N	4.4E	0	LO	250	N	N	19910408	111246	246	135	78	45	45
86	6	NIGER	W. NIGER,SANDSTORM			15.2N	4.5E	0	LO	250	N	N	19910408	111248	246	135	78	45	45
86	7	NIGER	W. NIGER,SANDSTORM			14.9N	5.2E	0	LO	250	N	N	19910408	111300	246	137	79	45	45
86	8	NIGER	W. NIGER,SANDSTORM			14.8N	5.3E	5	LO	250	N	N	19910408	111302	246	137	79	45	45
86	9	NIGER	W. NIGER,SANDSTORM			14.7N	5.5E	5	LO	250	N	N	19910408	111305	246	138	79	45	45
86	10	NIGER	W. NIGER,SANDSTORM	14.0N	6.0E	14.6N	5.8E	0	LO	250	N	N	19910408	111312	246	139	80	45	45
86	11	NIGER	W. NIGER,SANDSTORM	14.0N	6.0E	14.5N	6.0E	0	LO	250	N	N	19910408	111314	246	139	80	45	45

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	NADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
86	12	NIGERIA	SOKOTO AREA	13.3N	5.4E 14.4N	6.2E	0	LO	250	N	19910408	111318	246	140	80	45
86	13	NIGERIA	SOKOTO AREA	13.0N	5.2E 14.3N	6.4E	0	LO	250	N	19910408	111322	246	140	80	45
86	14	NIGER	MARADI AREA	13.5N	7.0E 13.9N	7.2E	0	LO	250	N	19910408	111337	246	144	81	45
86	15	NIGERIA	W.OF KANO	12.5N	7.3E 13.8N	7.3E	0	LO	250	N	19910408	111339	246	144	81	45
86	16	NIGERIA	W.OF KANO	12.4N	7.2E 13.7N	7.5E	0	LO	250	N	19910408	111342	246	145	81	45
86	17	NIGERIA	W.OF KANO	12.3N	7.5E 13.6N	7.7E	0	LO	250	N	19910408	111346	246	146	82	45
86	18	NIGERIA	W.OF KANO	12.5N	8.0E 13.6N	7.9E	0	LO	250	N	19910408	111349	246	146	82	45
86	19	NIGERIA	NW.OF KANO	13.0N	8.0E 13.5N	8.0E	0	LO	250	N	19910408	111351	246	147	82	45
86	20	NIGERIA	NW.OF KANO		13.4N	8.1E	10	LO	250	N	19910408	111353	246	148	82	45
86	21	NIGER	NEAR ZINDER	13.5N	9.0E 13.4N	8.2E	10	LO	250	N	19910408	111355	246	148	82	45
86	22	NIGER	NORTH OF ZINDER	14.0N	9.0E 13.3N	8.4E	0	LO	250	N	19910408	111358	246	149	82	45
86	23	NIGERIA	HADEJIA AREA	12.5N	10.0E 12.7N	9.7E	20	LO	250	N	19910408	111421	246	157	83	45
86	24	NIGERIA	HADEJIA AREA	12.2N	9.3E 12.6N	9.8E	20	LO	250	N	19910408	111423	246	158	84	45
86	25	NIGERIA	KANO AREA, KANO RIVER	12.0N	8.7E 12.5N	9.9E	30	LO	250	N	19910408	111426	246	159	84	45
86	26	NIGERIA	AREA W. OF KANO	12.0N	8.0E 12.5N	10.1E	40	LO	250	N	19910408	111428	246	160	84	45
86	27	NIGERIA	NEAR POTISKUM	12.0N	11.0E 11.8N	11.4E	60	NV	250	N	19910408	111453	246	174	85	45
86	28	NIGERIA	NEAR POTISKUM	11.0N	11.5E 11.7N	11.6E	70	NV	250	N	19910408	111457	246	177	85	45
86	29	CHAD	CAMEROON BORDER, LOGONE R	10.8N	15.2E 11.2N	12.5E	5	LO	250	N	19910408	111513	246	190	85	45
86	30	CHAD	AREA NEAR BONGOR		10.6N	13.7E	5	LO	250	N	19910408	111535	246	210	85	45
86	31	CHAD	AREA NEAR BONGOR		10.3N	14.2E	5	LO	250	N	19910408	111545	246	219	85	45
86	32	CHAD	CHARI RIVER, S. NDJAMENA	11.3N	15.1E 10.2N	14.4E	0	LO	250	N	19910408	111548	246	221	85	45
86	33	CHAD	CHARI RIVER, S. NDJAMENA	11.0N	15.5E 10.1N	14.6E	0	LO	250	N	19910408	111552	246	225	85	45
86	34	CHAD	CHARI RIVER, S. NDJAMENA	10.8N	16.0E 10.0N	14.8E	10	LO	250	N	19910408	111555	246	227	85	45
86	35	CHAD	CHARI RIVER, S. NDJAMENA	10.5N	16.5E	14.9E	20	LO	250	N	19910408	111558	246	230	85	45
86	36	CHAD	CLDY, HAZY		9.3N	16.1E	80	LO	250	N	19910408	111620	246	244	84	45
86	37	CHAD	CLDY, HAZY		9.1N	16.4E	80	LO	250	N	19910408	111625	246	247	84	45
86	38	CHAD	CLDY, HAZY		9.0N	16.7E	80	LO	250	N	19910408	111630	246	250	84	45
86	39	CHAD	CLDY, HAZY		8.4N	17.7E	50	LO	250	N	19910408	111649	246	258	83	45
86	40	CHAD	OUHAM RIVER AREA	8.4N	17.8E	8.2N	60	LO	250	N	19910408	111655	246	260	83	45
86	41	CENTRAL AFRICAN REP.	OUHAM RIVER AREA	7.6N	18.0E	8.0N	40	LO	250	N	19910408	111704	246	263	82	45
86	42	CENTRAL AFRICAN REP.	OUHAM RIVER AREA	7.3N	18.2E	7.8N	50	LO	250	N	19910408	111710	246	264	82	45
86	43	CENTRAL AFRICAN REP.	CLDY, HAZY		6.9N	20.3E	60	LO	250	N	19910408	111739	246	271	80	45
86	44	CENTRAL AFRICAN REP.	CLDY, HAZY		6.9N	20.5E	70	LO	250	N	19910408	111742	246	271	80	45
86	45	CENTRAL AFRICAN REP.	CLDY, HAZY		6.5N	21.1E	80	LO	250	N	19910408	111753	246	273	80	45
86	46	CENTRAL AFRICAN REP.	CLDY, HAZY		5.8N	22.4E	90	LO	250	N	19910408	111818	246	277	78	45
86	47	CENTRAL AFRICAN REP.	CLDY, HAZY		5.5N	22.8E	90	LO	250	N	19910408	111826	245	278	78	45
86	48	CENTRAL AFRICAN REP.	CLDY, HAZY		5.4N	23.0E	90	LO	250	N	19910408	111829	245	278	77	45
86	49	CENTRAL AFRICAN REP.	CLDY, HAZY		5.3N	23.2E	90	LO	250	N	19910408	111834	245	278	77	45
86	50	CENTRAL AFRICAN REP.	CLDY, HAZY		5.1N	23.5E	90	LO	250	N	19910408	111839	245	279	77	45
86	51	CENTRAL AFRICAN REP.	CLDY, HAZY		4.9N	23.9E	90	LO	250	N	19910408	111847	245	280	76	45

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	CENTER LON	NADIR LAT	NADIR LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
86	52	CENTRAL AFRICAN REP.	CLDY, HAZY			4.6N	24.4E	90	LO	250	N	N	19910408	111856	245	280	76	45
86	53	CENTRAL AFRICAN REP.	CLDY, HAZY			4.4N	24.8E	90	LO	250	N	N	19910408	111903	245	281	75	45
86	54	CENTRAL AFRICAN REP.	CLDY, HAZY			4.3N	24.9E	90	LO	250	N	N	19910408	111906	245	281	75	45
86	55	CENTRAL AFRICAN REP.	CLDY, HAZY			4.2N	25.1E	90	LO	250	N	N	19910408	111909	245	281	75	45
86	56	CENTRAL AFRICAN REP.	CLDY, HAZY			4.1N	25.2E	90	LO	250	N	N	19910408	111912	245	282	75	45
86	57	CENTRAL AFRICAN REP.	CLDY, HAZY			4.0N	25.5E	80	LO	250	N	N	19910408	111917	245	282	74	45
86	58	CENTRAL AFRICAN REP.	CLDY, HAZY			3.8N	25.9E	80	LO	250	N	N	19910408	111924	245	282	74	45
86	59	UGANDA	SW HALF LAKE ALBERT	1.4N	30.6E	0.9N	30.9E	40	LO	250	N	N	19910408	112100	245	287	68	45
86	60	UGANDA	CENTRAL LAKE ALBERT	1.6N	30.8E	0.8N	31.0E	60	LO	250	N	N	19910408	112102	245	287	68	45
86	61	UGANDA	NE SECTION LAKE ALBERT	2.1N	31.3E	0.7N	31.1E	80	LO	250	N	N	19910408	112104	245	287	68	45
86	62	TANZANIA	LAKE NATRON AREA	2.3S	36.0E	2.0S	35.8E	20	LO	250	N	N	19910408	112235	245	289	62	45
86	63	TANZANIA	LAKE MANYARA AREA	3.8S	36.0E	3.2S	37.8E	60	LO	250	N	N	19910408	112312	245	290	60	45
86	64	TANZANIA	KILIMANJARO CLOUDY	3.3S	37.0E	3.9S	39.0E	70	LO	250	N	N	19910408	112336	245	290	58	45
86	65	TANZANIA	KILIMANJARO CLOUDY	3.3S	37.0E	4.1S	39.4E	70	LO	250	N	N	19910408	112344	245	290	58	45
86	66	KENYA	MOMBASA AREA, GOOD SHOT	4.0S	39.5E	4.3S	39.8E	30	LO	250	N	N	19910408	112350	245	290	57	45
86	67	MAURITIUS		20.0S	57.5E	14.3S	58.5E	70	LO	250	N	N	19910408	112937	244	289	35	45
86	68	MAURITIUS	CARADOS CARAJOS SHOALS	16.7S	59.7E	15.0S	59.9E	40	LO	250	N	N	19910408	113003	244	289	34	45
86	69	MAURITIUS	RODRIGUES	19.7S	63.3E	16.8S	63.8E	40	LO	250	N	N	19910408	113112	244	288	29	45
86	70	CAPE VERDE ISLANDS	SANTO ANTAO & VICENTE	17.0N	25.2W	18.0N	25.7W	40	LO	250	N	N	19910408	124425	247	124	71	46
86	71	CAPE VERDE ISLANDS	SAO NICOLAU	16.5N	24.4W	17.5N	24.6W	50	LO	250	N	N	19910408	124445	247	125	72	46
86	72	CAPE VERDE ISLANDS	BOA VISTA & SAL	16.6N	22.9W	17.0N	23.3W	80	LO	250	N	N	19910408	124507	247	127	74	46
86	73	CAPE VERDE ISLANDS	BOA VISTA	16.3N	23.3W	16.9N	23.1W	40	LO	250	N	N	19910408	124511	247	127	74	46
86	74	CAPE VERDE ISLANDS	BOA VISTA	16.1N	22.8W	16.7N	22.7W	40	LO	250	N	N	19910408	124518	247	128	74	46
86	75	CAPE VERDE ISLANDS	SANTIAGO & MAIO	15.2N	23.7W	16.5N	22.3W	40	LO	250	N	N	19910408	124525	247	128	75	46
86	76	SENEGAL	DAKAR AREA	14.8N	17.5W	14.6N	18.2W	0	LO	250	N	N	19910408	124637	246	136	79	46
86	77	SENEGAL	SALOUW RIVER & DELTA AREA	14.3N	16.8W	14.4N	17.7W	0	LO	250	N	N	19910408	124646	246	137	80	46
86	78	GAMBIA	BANJUL AREA, GAMBIA RVR	13.5N	17.0W	14.2N	17.2W	0	LO	250	N	N	19910408	124655	246	139	80	46
86	79	GAMBIA	BANJUL AREA, GAMBIA RVR	13.5N	16.8W	14.0N	16.9W	0	LO	250	N	N	19910408	124700	246	140	81	46
86	80	GAMBIA	BANJUL AREA, GAMBIA RVR	13.2N	16.7W	13.9N	16.6W	0	LO	250	N	N	19910408	124705	246	141	81	46
86	81	GAMBIA	BANJUL AREA, GAMBIA RVR	13.4N	16.2W	13.8N	16.5W	0	LO	250	N	N	19910408	124708	246	141	81	46
86	82	GAMBIA	GAMBIA RIVER, INLAND	13.5N	15.5W	13.7N	16.3W	0	LO	250	N	N	19910408	124712	246	142	81	46
86	83	GAMBIA	GAMBIA RIVER, INLAND	13.7N	15.0W	13.6N	16.0W	0	LO	250	N	N	19910408	124717	246	143	82	46
86	84	GAMBIA	GAMBIA RIVER, BANJUL AREA	13.3N	16.6W	12.7N	14.3W	0	LO	250	N	N	19910408	124748	246	152	83	46
86	85	GUINEA BISSAU	ARCHIPELAGO DOS BIJAGOSA	11.4N	15.9W	12.4N	13.6W	0	LO	250	N	N	19910408	124800	246	157	84	46
86	86	GUINEA BISSAU	CANAL DO GEBIA	11.8N	15.0W	12.3N	13.4W	0	LO	250	N	N	19910408	124804	246	159	84	46
86	87	GUINEA	N. CENTRAL, SUNGLINT RIVERS			12.0N	12.9W	0	LO	250	N	N	19910408	124813	246	164	84	46
86	88	GUINEA	UNIDENTIFIED RESERVOIR			11.5N	12.0W	0	LO	250	N	N	19910408	124829	246	174	85	46
86	89	GUINEA	INLAND AREA			11.2N	11.3W	0	LO	250	N	N	19910408	124843	246	185	85	46
86	90	GUINEA	NIGER RIVER	11.0N	9.0W	10.5N	10.0W	0	LO	250	N	N	19910408	124906	246	206	86	46
86	91	GUINEA	NIGER RIVER AREA/TRIBUTY			10.3N	9.7W	20	LO	250	N	N	19910408	124912	246	212	86	46

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	LONG	NADIR LAT	LONG	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
86	92	ZAIRE	LAC UPEMBA AREA	8.5S	26.5E	9.5S	25.2E	50	LO	250	N	N	19910408	130013	245	291	47	46
86	93	ZAIRE	LAKE MMERU AREA	9.0S	28.7E	10.2S	26.4E	50	LO	250	N	N	19910408	130037	245	291	45	46
86	94	ZAIRE	LAKE TANGANYIKA			11.1S	28.1E	80	LO	250	N	N	19910408	130108	245	291	43	46
86	95	ZAIRE	LAKE TANGANYIKA			11.2S	28.3E	80	LO	250	N	N	19910408	130111	245	291	43	46
86	96	MEXICO	MONTERREY AREA	25.8N	100.4W	28.5N	98.5W	10	LO	250	N	N	19910408	140514	247	94	22	47
86	97	MEXICO	AREA E. OF MONTERREY	25.8N	99.7W	28.5N	97.2W	70	LO	250	N	N	19910408	140533	247	95	24	47
86	98	MEXICO	AREA E. OF MONTERREY			28.5N	95.7W	95	LO	250	N	N	19910408	140555	247	95	25	47
86	99	MEXICO	AREA N. OF MONTERREY			28.4N	95.3W	70	LO	250	N	N	19910408	140601	247	96	25	47
86	100	BRAZIL	AMAZON RIVER, SEDIMENT			6.2N	50.0W	90	LO	250	N	N	19910408	155828	246	276	80	48
86	101	BRAZIL	AMAZON RIVER, SEDIMENT			5.4N	48.7W	90	LO	250	N	N	19910408	155853	246	279	79	48
86	102	BRAZIL	TREWARTHA'S HUMP AREA	5.5S	35.3W	3.7S	32.9W	40	LO	250	N	N	19910408	160355	245	291	60	48
86	103	BRAZIL	JOAO PESSOA AREA	6.8S	34.9W	5.6S	29.6W	60	LO	250	N	N	19910408	160458	245	292	56	48
86	104	NAMIBIA	NAMIB DESERT, LOW SUN ANG	26.3S	15.4E	24.8S	15.3E	0	LO	250	N	N	19910408	161757	245	281	6	48
86	105	NAMIBIA	NAMIB DESERT, LOW SUN ANG	25.5S	15.3E	24.9S	15.6E	0	LO	250	N	N	19910408	161801	245	280	6	48
86	106	NAMIBIA	NAMIB DESERT, LOW SUN ANG	24.7S	15.6E	25.1S	16.6E	0	LO	250	N	N	19910408	161816	245	280	5	48
86	107	NAMIBIA	NAMIB DESERT, LOW SUN ANG	23.4S	14.9E	25.3S	17.4E	0	LO	250	N	N	19910408	161828	245	280	4	48
86	108	MEXICO	SO. TIP BAJA	23.5N	110.0W	22.7N	109.9W	0	LO	250	N	N	19910408	172120	247	113	57	49
86	109	MEXICO	SO. BAJA	23.8N	110.2W	22.6N	109.6W	0	LO	250	N	N	19910408	172125	247	113	57	49
87	1	GHANA	ACCRA, COAST	5.0N	0.0	4.1N	3.4E	30	LO	250	U	U	19910409	121412	246	298	82	61
87	2	AFRICA	COAST, CLOUDS, DARK			3.8N	3.9E	40	LO	250	U	U	19910409	121420	246	298	82	61
87	3	GABON	CLOUDS			0.1S	10.6E	85	LO	250	N	N	19910409	121630	246	298	73	61
87	4	GABON	CLOUDS			0.2S	10.8E	90	LO	250	N	N	19910409	121633	246	298	73	61
87	5	GABON	COAST, SWAMP, LAGOONS	1.8S	9.0E	0.5S	11.3E	60	LO	250	N	Y	19910409	121643	246	298	73	61
87	6	GABON	COAST, LAGOONS	2.3S	9.4E	0.6S	11.5E	40	LO	250	U	Y	19910409	121646	246	298	72	61
87	7	GABON	COAST, LAGOONS	2.9S	9.9E	0.7S	11.6E	50	LO	250	U	Y	19910409	121649	246	298	72	61
87	8	GABON	COAST, LAGOON, NYANGO R.	3.5S	10.9E	0.8S	11.8E	50	LO	250	N	Y	19910409	121652	246	298	72	61
87	9	CONGO	COAST	4.0S	11.3E	1.0S	12.1E	50	LO	250	U	Y	19910409	121657	246	298	72	61
87	10	GABON	NGOUNIE RIVER	1.6S	10.8E	1.4S	12.8E	85	LO	250	U	Y	19910409	121711	246	298	71	61
87	11	GABON	NGOUNIE RIVER	1.9S	11.0E	1.5S	12.9E	85	LO	250	U	Y	19910409	121714	246	298	71	61
87	12	GABON	RIVER, CLOUDS			1.5S	13.0E	85	LO	250	U	Y	19910409	121716	246	298	70	61
87	13	GABON	CLOUDS, HILLS			1.7S	13.2E	90	LO	250	U	Y	19910409	121720	246	298	70	61
87	14	CONGO	CLOUDS, HILLS			2.1S	13.9E	90	LO	250	U	Y	19910409	121733	246	298	69	61
87	15	CONGO	COAST, POINTE-NOIRE	4.7S	12.0E	2.2S	14.1E	60	LO	250	U	Y	19910409	121736	246	298	69	61
87	16	GABON	IVINDO R. OGOQUE R.	0.2N	12.4E	2.5S	14.7E	85	LO	250	N	N	19910409	121747	246	298	68	61
87	17	CONGO	CONGO RIVER	2.7S	16.1E	2.8S	15.1E	80	LO	250	N	Y	19910409	121756	246	298	68	61
87	18	CONGO	CONGO RIVER, KWA RIVER	3.2S	16.1E	2.9S	15.3E	80	LO	250	N	Y	19910409	121800	246	298	68	61
87	19	CONGO	CONGO RIVER	3.5S	16.0E	3.0S	15.5E	80	LO	250	N	Y	19910409	121803	246	298	67	61
87	20	ZAIRE	KINSHASA, BRAZZAVILLE	4.1S	15.7E	3.1S	15.7E	75	LO	250	N	Y	19910409	121806	246	298	67	61
87	21	CONGO	KINSHASA, BRAZZAVILLE	4.4S	15.1E	3.2S	15.9E	85	LO	250	N	Y	19910409	121811	246	298	67	61
87	22	CONGO	CONGO RIVER	4.7S	14.7E	3.3S	16.1E	85	LO	250	U	Y	19910409	121814	246	298	67	61

TABLE 4.3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	LONG	MADIR LAT	LONG	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
87	23	ZAIRE	CONGO RIVER/ESTUARY, CST	6.0S	12.5E	3.7S	16.8E	75	LO	250	U	N	19910409	121828	246	298	68	61
87	24	ZAIRE	CONGO RIVER, KWA RIVER	3.2S	16.2E	3.9S	17.1E	85	NV	250	N	Y	19910409	121834	246	298	65	61
87	25	ZAIRE	KWA RIVER, FIMI RIVER	3.1S	16.8E	4.0S	17.3E	85	NV	250	U	Y	19910409	121837	246	298	65	61
87	26	ZAIRE	KWA R, FIMI R, BANDUNDU	3.3S	17.3E	4.1S	17.4E	85	LO	250	U	Y	19910409	121840	246	298	65	61
87	27	ZAIRE	KASAI RIVER, RAINFOREST	3.5S	18.1E	4.2S	17.6E	85	LO	250	U	Y	19910409	121843	246	298	65	61
87	28	ZAIRE	KASAI RIVER, RAINFOREST	3.6S	18.6E	4.3S	17.8E	85	LO	250	U	Y	19910409	121847	246	298	65	61
87	29	ZAIRE	KWANGO R, WAMBA R, RNFRST	4.1S	17.1E	4.8S	18.7E	80	LO	250	N	N	19910409	121904	246	298	64	61
87	30	ZAIRE	DIBAYA-IUBWE, KASAI R.	4.4S	18.1E	5.4S	19.7E	30	LO	250	N	Y	19910409	121923	246	297	62	61
87	31	ZAIRE	PORT FRANQUET, KASAI R.	4.5S	20.6E	5.5S	19.8E	30	LO	250	N	Y	19910409	121926	246	297	62	61
87	32	ZAIRE	KASAI R, LULUA R, RNFRST	5.0S	21.0E	5.6S	20.1E	30	LO	250	N	Y	19910409	121930	246	297	62	61
87	33	ZAIRE	KASAI R, HILLS, RAINFOREST	5.8S	21.1E	5.7S	20.2E	30	LO	250	N	Y	19910409	121933	246	297	62	61
87	34	ZAIRE	LULUA R, LUEBO R.	5.6S	21.6E	5.8S	20.5E	30	LO	250	N	Y	19910409	121938	246	297	61	61
87	35	ZAIRE	SANKURU RIVER, DARK	3.8S	21.7E	6.3S	21.3E	80	LO	250	U	Y	19910409	121953	246	297	60	61
87	36	ZAIRE	DARK			6.8S	22.2E	80	LO	250	U	Y	19910409	122010	246	297	59	61
87	37	ZAIRE	SANKURU RIVER, DARK	4.0S	21.6E	7.0S	22.5E	80	LO	250	U	Y	19910409	122017	246	297	59	61
87	38	NAMIBIA	ETOSHA PAN, RIO CUBANGO	18.8S	16.6E	10.7S	29.2E	15	HO	250	N	N	19910409	122222	245	296	51	61
87	39	ZAMBIA	ZAMBEZI R/TRIBUTARIES	15.8S	26.0E	11.1S	30.0E	15	LO	250	N	N	19910409	122236	245	296	50	61
87	40	ZAMBIA	ZAMBEZI R/TRIBUTARIES	16.7S	24.2E	11.2S	30.3E	10	LO	250	N	N	19910409	122242	245	296	50	61
87	41	BOTSWANA	MAKGADIKGADI SALT PANS	21.0S	25.0E	11.5S	30.9E	0	HO	250	N	N	19910409	122252	245	296	49	61
87	42	ZAMBIA	LAKE KARIBA, HILLS	17.5S	27.3E	11.7S	31.2E	10	LO	250	N	Y	19910409	122259	245	296	49	61
87	43	ZAMBIA	LAKE KARIBA, HILLS	17.6S	27.5E	12.2S	32.2E	10	LO	250	N	Y	19910409	122316	245	295	47	61
87	44	ZIMBABWE	NATA R, SUA PAN	19.8S	27.4E	12.8S	33.4E	5	LO	250	N	N	19910409	122338	245	295	46	61
87	45	MALAWI	LAKE CHILWA	15.3S	35.7E	14.2S	36.1E	70	LO	250	U	Y	19910409	122428	245	294	43	61
87	46	MALAWI	LAKE CHILWA	15.8S	35.7E	14.6S	37.0E	70	LO	250	U	Y	19910409	122443	245	294	42	61
87	47	MALAWI	LAKE CHILWA	15.5S	35.8E	15.4S	38.8E	70	LO	250	N	N	19910409	122516	245	294	40	61
87	48	MOZAMBIQUE	COAST, RIVER EFFLUENT	17.8S	37.4E	18.1S	40.3E	80	LO	250	N	N	19910409	122541	245	293	38	61
87	49	MOZAMBIQUE	COAST, ATOLLS	17.3S	38.5E	16.2S	40.4E	60	LO	250	N	N	19910409	122544	245	293	38	61
87	50	MOZAMBIQUE	COAST, ATOLLS	17.2S	39.2E	16.3S	40.7E	60	LO	250	N	N	19910409	122549	245	293	38	61
87	51	MOZAMBIQUE	COAST, ATOLLS	16.8S	39.5E	16.4S	40.9E	70	LO	250	N	N	19910409	122553	245	293	37	61
87	52	MADAGASCAR	TSIRIBITHINA R/DELTA, CST	19.8S	44.3E	18.1S	44.8E	85	LO	250	U	N	19910409	122700	245	292	33	61
87	53	MADAGASCAR	MAHARIVO R/MOUTH, COAST	20.5S	44.5E	18.1S	45.0E	70	LO	250	U	N	19910409	122703	245	292	33	61
87	54	MADAGASCAR	RIVERS, COAST	21.3S	43.9E	18.2S	45.2E	50	LO	250	N	N	19910409	122707	245	292	33	61
87	55	MADAGASCAR	COASTAL PLAIN	21.5S	44.2E	18.3S	45.4E	45	LO	250	N	Y	19910409	122711	245	292	32	61
87	56	MADAGASCAR	MAHARIVO R, COASTAL PLAIN	20.8S	44.7E	18.4S	45.6E	60	LO	250	N	Y	19910409	122714	245	292	32	61
87	57	MADAGASCAR	COASTAL PLAIN, HILLS	20.4S	45.2E	18.5S	45.8E	60	LO	250	N	Y	19910409	122717	245	292	32	61
87	58	MADAGASCAR	SAKENY R, TSIRIBITHINA R.	20.0S	45.5E	18.5S	46.0E	40	LO	250	N	Y	19910409	122720	245	292	32	61
87	59	MADAGASCAR	MOUNTAINS			18.8S	46.5E	85	LO	250	N	Y	19910409	122730	245	291	31	61
87	60	MADAGASCAR	MOUNTAINS			18.9S	46.7E	80	LO	250	N	Y	19910409	122733	245	291	31	61
87	61	MADAGASCAR	MOUNTAINS			18.9S	46.9E	85	LO	250	N	Y	19910409	122736	245	291	31	61
87	62	MADAGASCAR	MOUNTAINS, CLOUDS			19.1S	47.3E	90	LO	250	N	N	19910409	122742	245	291	30	61

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	CENTER LON	MADIR LAT	MADIR LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
87	63	MADAGASCAR	MOUNTAINS, WEST CST. CLDS	17.9S	49.3E	19.4S	48.0E	85	LO	250	N	Y	19910409	122755	245	291	30	61
87	64	MADAGASCAR	MOUNTAINS, WEST CST. CLDS	18.4S	49.2E	19.4S	48.2E	90	LO	250	N	Y	19910409	122758	245	291	29	61
87	65	MADAGASCAR	WEST COAST, CLOUDS	19.0S	49.0E	19.5S	48.4E	75	LO	250	N	Y	19910409	122802	245	291	29	61
87	66	MADAGASCAR	WEST COAST, CLOUDS	19.5S	48.8E	19.6S	48.6E	75	LO	250	N	Y	19910409	122805	245	291	29	61
87	67	MADAGASCAR	WEST COAST, CLOUDS	20.1S	48.6E	19.7S	48.8E	80	LO	250	N	Y	19910409	122808	245	291	29	61
87	68	REUNION	CLOUD COVERED	21.2S	55.6E	21.9S	55.1E	50	LO	250	N	Y	19910409	122952	245	288	22	61
87	69	MAURITIUS	CLOUD COVERED, DARK	20.4S	57.5E	22.2S	55.8E	50	LO	250	N	Y	19910409	123004	245	288	21	61
87	70	HAITI	TORTUE I., NORTH SIDE	19.4N	72.8W	4.7N	18.4W	40	LO	250	U	Y	19910409	133344	245	103	43	62
87	71	DOMINICAN REPUBLIC	CORD. CENTRAL, NORTH SIDE	19.2N	71.3W	4.7N	18.5W	40	LO	250	U	Y	19910409	133347	245	104	43	62
87	72	DOMINICAN REPUBLIC	CORD. CENTRAL, NORTH SIDE	19.3N	71.0W	4.7N	18.6W	60	LO	250	U	N	19910409	133350	245	104	43	62
87	73	DOMINICAN REPUBLIC	SANTO DOMINGO, SOUTH SIDE	18.7N	69.8W	4.8N	18.7W	70	LO	250	U	N	19910409	133354	245	104	44	62
87	74	DOMINICAN REPUBLIC	EAST END	19.0N	69.0W	4.8N	18.9W	75	LO	250	U	N	19910409	133359	245	104	44	62
87	75	PUERTO RICO	CLOUD COVERED, DARK	18.0N	66.5W	4.9N	19.2W	70	LO	250	U	N	19910409	133409	245	104	45	62
87	76	LESSER ANTILLES	ANGUILLA, DARK	18.0N	63.5W	5.0N	19.4W	70	LO	250	U	N	19910409	133415	245	104	45	62
87	77	LESSER ANTILLES	BARBUDA, ANTUGUA, DARK	17.1N	61.8W	6.2N	22.5W	50	LO	250	U	N	19910409	133552	245	107	51	62
87	78	LESSER ANTILLES	ANGUILLA, SAINT MARTIN, DK	18.0N	62.5W	6.3N	22.6W	50	LO	250	U	N	19910409	133557	245	107	52	62
87	79	ANGOLA	COAST, LOBITO, DARK	12.5S	13.5E	12.7S	9.3E	15	LO	250	U	Y	19910409	135658	245	296	47	62
87	80	ANGOLA	COAST, DARK	13.0S	13.3E	12.7S	9.4E	5	LO	250	U	Y	19910409	135700	245	296	47	62
87	81	ANGOLA	INTERIOR, DARK					0	LO	250	U	N	19910409	135703	245	296	46	62
87	82	ANGOLA	INTERIOR	14.5S	12.5E	12.9S	9.7E	0	LO	250	N	Y	19910409	135708	245	295	46	62
87	83	ANGOLA	COAST, MOCAMEDES	15.0S	12.5E	13.0S	9.9E	0	LO	250	N	Y	19910409	135710	245	295	46	62
87	84	ANGOLA	COAST, RIO COROCA,	15.8S	12.3E	13.1S	10.0E	0	LO	250	N	Y	19910409	135712	245	295	46	62
87	85	NAMIBIA	INTERIOR, DARK					0	LO	250	U	N	19910409	135723	245	295	45	62
87	86	NAMIBIA	EKUMA WADI, SALT PAN FLD	17.5S	16.0E	14.4S	12.8E	0	LO	250	U	N	19910409	135801	244	295	43	62
87	87	NAMIBIA	EKUMA WADI, SALT PAN FLD	18.0S	15.5E	14.5S	13.0E	0	LO	250	U	N	19910409	135805	244	295	42	62
87	88	NAMIBIA	RIO CUBANGO, KALAHARI DES	17.8S	18.5E	14.6S	13.1E	0	LO	250	U	N	19910409	135808	244	295	42	62
87	89	ANGOLA	INTERIOR, DARK					0	LO	250	U	N	19910409	135827	244	294	41	62
87	90	NAMIBIA	RIO CUBANGO, KALAHARI DES	18.6S	19.9E	15.2S	14.5E	0	LO	250	U	N	19910409	135833	244	294	41	62
87	91	ANGOLA	INTERIOR, DARK					20	LO	250	U	N	19910409	135840	244	294	40	62
87	92	ANGOLA	INTERIOR, DARK					30	LO	250	U	N	19910409	135905	244	294	39	62
87	93	ANGOLA	INTERIOR, DARK					0	LO	250	U	N	19910409	135909	244	294	38	62
87	94	BOTSWANA	OKAVANGO DELTA/SWAMP	19.5S	23.0E	16.3S	16.9E	0	LO	250	U	N	19910409	135915	244	293	38	62
87	95	BOTSWANA	INTERIOR, DARK					0	LO	250	U	N	19910409	135920	244	293	38	62
87	96	BOTSWANA	MAKGADIKGADI SALT PANS	20.0S	23.5E	16.6S	17.6E	0	LO	250	U	Y	19910409	135927	244	293	37	62
87	97	BOTSWANA	NTWETWE SALT PAN, DARK	21.0S	25.0E	16.9S	18.2E	5	LO	250	U	Y	19910409	135938	244	293	36	62
87	98	BOTSWANA	SUA SALT PAN, DARK	20.0S	26.0E	17.0S	18.5E	5	LO	250	U	Y	19910409	135943	244	293	36	62
87	99	ZIMBABWE	L. KARIBA, PANORAMA SE	19.0S	31.0E	17.2S	18.9E	25	HO	250	U	N	19910409	135949	244	293	35	62
87	100	BOTSWANA	MAKGADIKGADI SALT PANS	22.0S	26.0E	17.4S	19.3E	0	LO	250	U	N	19910409	135956	244	293	35	62
87	101	ZIMBABWE	MATABE HILLS, PANORAMA SE	21.0S	30.0E	17.5S	19.5E	50	HO	250	U	N	19910409	140000	244	293	35	62
87	102	ZIMBABWE	MASHABA MTNS, PANORAMA SE	20.0S	31.0E	17.6S	19.9E	50	HO	250	U	N	19910409	140007	244	293	35	62

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	LOW	NADIR LAT	LOW	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
87	103	BOTSWANA	LIMPOPO R. PANORAMA SE.	22.0S	25.5E	17.8S	20.2E	25	H0	250	U	N	19910409	140012	244	292	34	62
87	104	BOTSWANA	MAKGADIKGADI SALT PANS	19.8S	26.2E	18.0S	20.8E	0	L0	250	U	N	19910409	140023	244	292	34	62
87	105	BOTSWANA	HILLS, PRAIRIE, PANOR. SE	18.3S	21.4E	18.1S	21.0E	0	L0	250	U	N	19910409	140028	244	292	33	62
87	106	ZIMBABWE	HILLS, PRAIRIE, PANOR. SE	18.3S	21.4E	18.3S	21.4E	0	L0	250	U	N	19910409	140032	244	292	33	62
87	107	BOTSWANA	EASTERN PRAIRIE	18.4S	21.8E	18.4S	21.8E	5	L0	250	U	N	19910409	140040	244	292	33	62
87	108	BOTSWANA	EASTERN PRAIRIE	18.5S	22.1E	18.5S	22.1E	20	L0	250	U	N	19910409	140044	244	292	32	62
87	109	ZIMBABWE	MASHABA MTHS, DARK	20.0S	30.0E	18.7S	22.4E	25	L0	250	U	N	19910409	140050	244	292	32	62
87	110	BOTSWANA	EASTERN PRAIRIE, DARK	18.8S	22.8E	18.8S	22.8E	30	L0	250	U	N	19910409	140057	244	292	31	62
87	111	BOTSWANA	EASTERN PRAIRIE, DARK	19.1S	23.5E	19.1S	23.5E	30	L0	250	U	N	19910409	140108	244	291	31	62
87	112	BOTSWANA	EASTERN PRAIRIE, DARK	19.2S	23.8E	19.2S	23.8E	50	L0	250	U	N	19910409	140114	244	291	30	62
87	113	REPUBLIC SOUTH AFRICA	LIMPOPO R./VALLEY, DARK	19.6S	24.7E	19.6S	24.7E	60	H0	250	U	N	19910409	140128	244	291	29	62
87	114	ZIMBABWE	EASTERN HIGHLANDS, V. DARK	20.0S	25.7E	20.0S	25.7E	80	L0	250	U	N	19910409	140145	244	291	28	62
87	115	ZIMBABWE	VERY DARK	20.4S	26.8E	20.4S	26.8E	30	L0	250	U	N	19910409	140204	244	290	27	62
87	116	ZIMBABWE	VERY DARK, HIGHLANDS	21.3S	29.2E	21.3S	29.2E	20	L0	250	U	N	19910409	140244	244	289	25	62
87	117	ZIMBABWE	VERY DARK, HIGHLANDS	21.7S	30.4E	21.7S	30.4E	70	L0	250	U	N	19910409	140304	244	289	23	62
87	118	MOZAMBIQUE	VERY DARK	22.6S	33.3E	22.6S	33.3E	10	L0	250	U	N	19910409	140350	244	288	20	62
87	119	MOZAMBIQUE	COAST, SE PANORAMA, DARK	22.8S	33.9E	22.8S	33.9E	10	H0	250	U	N	19910409	140400	244	287	20	62
87	120	MOZAMBIQUE	COAST, VERY DARK	23.8S	37.6E	23.8S	37.6E	0	L0	250	U	N	19910409	140459	244	286	18	62
87	121	USA-CA	CHANNEL IS. PT. CONCEPCION	35.0N	120.0W	28.3N	114.9W	15	H0	250	U	N	19910409	150122	244	92	21	63
87	122	USA-CA	LOS ANGELES, MOJAVE DES.	33.5N	117.5W	28.3N	114.7W	0	L0	250	U	N	19910409	150125	244	92	21	63
87	123	USA-CA	SAN DIEGO, COAST	33.0N	116.5W	28.3N	114.5W	0	L0	250	U	N	19910409	150128	244	92	21	63
87	124	USA-CA	SALTON SEA, IMPERIAL VAL.	33.0N	116.0W	28.3N	114.2W	0	L0	250	U	N	19910409	150131	244	93	21	63
88	1	CHAD	DESERT, SAND STORM	19.2N	21.1E	19.2N	21.1E	0	L0	250	N	N	19910409	085815	246	112	63	59
88	2	CHAD	DESERT, SAND STORM	19.2N	21.2E	19.2N	21.2E	0	L0	250	N	N	19910409	085817	246	112	63	59
88	3	CHAD	SAND STORM, LINEAR OUTCR.	19.1N	21.4E	19.1N	21.4E	0	L0	250	N	N	19910409	085820	246	112	63	59
88	4	CHAD	SAND STORM, LINEAR OUTCR.	19.0N	21.5E	19.0N	21.5E	0	L0	250	N	N	19910409	085822	246	112	63	59
88	5	CHAD	SAND ST, DEPR. DU MOURDI	19.0N	21.6E	19.0N	21.6E	0	L0	250	N	N	19910409	085824	246	112	63	59
88	6	CHAD	SAND ST, DEPR. DU MOURDI	19.0N	21.7E	19.0N	21.7E	0	L0	250	N	N	19910409	085826	246	112	63	59
88	7	CHAD	SAND ST, DEPR. DU MOURDI	18.5N	23.8E	18.9N	21.8E	0	L0	250	N	Y	19910409	085828	246	112	63	59
88	8	CHAD	SAND ST, DEPR. DU MOURDI	18.5N	23.5E	18.8N	22.0E	0	L0	250	N	Y	19910409	085831	246	112	64	59
88	9	SUDAN	SAND ST, DEPR. DU MOURDI	18.6N	24.2E	18.2N	23.5E	0	L0	250	N	N	19910409	085857	246	113	65	59
88	10	SUDAN	SAND STORM, ROCK OUTCROPS	18.1N	23.8E	18.1N	23.8E	0	L0	250	N	N	19910409	085901	246	113	66	59
88	11	SUDAN	SAND STORM, GRANITE INTR.	17.5N	27.0E	17.4N	25.3E	10	L0	250	N	N	19910409	085928	246	114	67	59
88	12	SUDAN	LIBYAN DESERT, SAND STORM	17.2N	25.9E	17.2N	25.9E	0	L0	250	N	N	19910409	085937	246	114	68	59
88	13	SUDAN	LIBYAN DES. ROCK RIDGE, SS	16.5N	27.5E	16.9N	26.5E	10	L0	250	N	Y	19910409	085948	246	114	69	59
88	14	SUDAN	SAND ST, EL HEITAN PLAT.	15.5N	28.0E	16.9N	26.6E	15	L0	250	N	Y	19910409	085950	246	114	69	59
88	15	SUDAN	JABAL MAYDUB, SAND STORM	15.4N	26.5E	16.5N	27.5E	15	L0	250	N	N	19910409	090006	246	115	70	59
88	16	SUDAN	SAND STORM FRONT, DESERT	16.1N	28.4E	16.1N	28.4E	20	L0	250	N	N	19910409	090021	246	115	71	59
88	17	SUDAN	WADI MALIK, DESERT	16.5N	29.5E	16.0N	28.6E	30	L0	250	N	N	19910409	090026	246	115	71	59
88	18	SUDAN	WADI MALIK	14.4N	28.2E	15.7N	29.3E	45	L0	250	U	N	19910409	090037	246	115	72	59



TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	LONG	MADIR LAT	LONG	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
88	19	SUDAN	WHITE NILE	14.7N	32.1E	14.7N	31.4E	40	NV	250	N	N	19910409	090114	246	116	74	59
88	20	SUDAN	WHITE NILE	14.1N	32.3E	14.6N	31.5E	40	NV	250	N	N	19910409	090117	246	116	74	59
88	21	SUDAN	WHITE NILE, CLOUDS	13.5N	32.8E	14.5N	31.7E	50	LO	250	N	N	19910409	090121	246	116	74	59
88	22	SUDAN	BLUE NILE, DINDAR W, SGLT	13.6N	33.5E	13.9N	33.0E	0	LO	250	U	N	19910409	090144	246	117	76	59
88	23	SUDAN	WHITE NILE, EL GEZIRA IRR	14.0N	33.0E	13.8N	33.2E	20	NV	250	N	Y	19910409	090148	246	117	76	59
88	24	SUDAN	WHITE NILE, EL GEZIRA IRR	13.9N	32.4E	13.7N	33.5E	5	LO	250	N	Y	19910409	090152	246	117	76	59
88	25	SUDAN	WHITE NILE	13.1N	32.7E	13.6N	33.6E	0	LO	250	U	N	19910409	090155	246	117	77	59
88	26	SUDAN	ATBARAH R, SATIT R, RESER.	14.6N	35.8E	13.0N	34.9E	0	LO	250	N	N	19910409	090218	246	118	78	59
88	27	SUDAN	ATBARAH R, SATIT R.	14.0N	36.2E	12.9N	35.1E	0	LO	250	N	N	19910409	090221	246	118	78	59
88	28	ETHIOPIA	LAKE TANA	12.0N	37.2E	12.5N	35.8E	10	LO	250	N	Y	19910409	090235	246	118	79	59
88	29	ETHIOPIA	LAKE TANA, SUNGLINT	11.9N	37.3E	11.9N	36.9E	10	LO	250	N	Y	19910409	090255	246	119	81	59
88	30	ETHIOPIA	BLUE NILE, SGLT, BESHLO R	11.0N	38.3E	11.3N	38.1E	15	LO	250	N	N	19910409	090316	246	120	82	59
88	31	ETHIOPIA	DAMAKIL DEPR, AFRERA LAKE	13.4N	41.2E	10.4N	39.8E	10	LO	250	N	N	19910409	090348	246	122	84	59
88	32	ETHIOPIA	AFAR DEPRESSION, COAST	13.2N	41.8E	10.3N	39.9E	0	LO	250	N	N	19910409	090350	246	122	84	59
88	33	ETHIOPIA	AFAR DEPR, HALBA I, COAST	12.6N	42.8E	10.3N	40.1E	5	LO	250	N	N	19910409	090353	246	122	84	59
88	34	DJIBOUTI	TADJOURA GULF, L. ASSAL	11.8N	43.0E	10.2N	40.2E	10	LO	250	N	N	19910409	090356	246	122	84	59
88	35	ETHIOPIA	AFAR DEPRESSION			9.9N	40.8E	25	LO	250	U	N	19910409	090407	246	123	85	59
88	36	SOMALIA	WEST COAST, GULF OF ADEN	10.0N	44.0E	9.0N	42.4E	50	LO	250	N	N	19910409	090436	246	128	87	59
88	37	SOMALIA	FAFEM WADI, ERER WADI	7.4N	43.8E	8.3N	43.6E	60	LO	250	N	N	19910409	090459	246	144	88	59
88	38	DJIBOUTI	GULF TADJOURA, L. ASSAL	11.5N	43.0E	7.5N	45.2E	40	LO	250	N	N	19910409	090529	246	266	88	59
88	39	SOMALIA	INDIAN OCEAN COAST	8.6N	50.1E	6.6N	46.7E	60	LO	250	N	N	19910409	090557	246	286	87	59
88	40	SOMALIA	INDIAN OCEAN COAST	7.7N	49.6E	6.5N	46.9E	50	LO	250	N	N	19910409	090601	246	287	87	59
88	41	SOMALIA	INDIAN OCEAN COAST	6.9N	49.1E	6.4N	47.1E	45	LO	250	N	N	19910409	090604	246	288	86	59
88	42	SOMALIA	COAST, DUNES, SALT PANS	5.6N	48.5E	6.3N	47.2E	50	LO	250	N	N	19910409	090607	246	288	86	59
88	43	SOMALIA	COAST, DUNES, SALT PANS	4.9N	47.9E	6.2N	47.4E	50	LO	250	N	N	19910409	090611	246	289	86	59
88	44	SOMALIA	COAST, DUNES, SALT PANS	4.5N	47.6E	6.1N	47.6E	50	LO	250	N	N	19910409	090614	246	289	86	59
88	45	MAURITANIA	HASSIANE CUESTA, DESERT	22.0N	12.2W	22.6N	12.3W	0	NV	250	N	Y	19910409	102903	246	108	52	60
88	46	MAURITANIA	HASSIANE CUESTA, DESERT	22.1N	12.0W	22.5N	12.0W	0	NV	250	N	Y	19910409	102908	246	108	52	60
88	47	MAURITANIA	ADRAR DHAR, DESERT	21.3N	11.9W	22.4N	11.5W	0	NV	250	N	Y	19910409	102916	246	108	53	60
88	48	MAURITANIA	RICHAAT STRUCTURE, DESERT	21.2N	11.5W	22.2N	11.1W	0	NV	250	N	Y	19910409	102922	246	108	53	60
88	49	MAURITANIA	RICHAAT STRUCTURE, DESERT	21.1N	11.3W	22.0N	10.5W	0	NV	250	N	Y	19910409	102932	246	108	54	60
88	50	MAURITANIA	ADRAR DHAR, DESERT	21.0N	10.5W	21.9N	10.2W	0	NV	250	N	Y	19910409	102936	246	109	54	60
88	51	NIGERIA	RIMA R, GOULBIN MARADI R.	13.7N	5.5E	14.9N	7.1E	20	LO	250	N	N	19910409	103432	246	115	73	60
88	52	NIGER	GOULBIN MARADI R.	13.3N	7.2E	14.4N	8.0E	20	LO	250	N	N	19910409	103449	246	115	74	60
88	53	NIGERIA	GRAZING, HAZE			14.1N	8.7E	0	LO	250	N	N	19910409	103500	246	116	75	60
88	54	NIGERIA	KANO, GRAZING	13.6N	8.8E	13.5N	9.9E	0	NV	250	N	Y	19910409	103522	246	116	76	60
88	55	NIGERIA	KANO, KANO R, DUST STORM	12.1N	9.0E	13.3N	10.3E	25	LO	250	N	Y	19910409	103530	246	116	77	60
88	56	NIGERIA	KOMADUGU GANA R/SWAMP	12.6N	11.5E	12.6N	11.7E	25	NV	250	N	N	19910409	103555	246	117	78	60
88	57	CAMEROON	L. CHAD, CHARI R/DELTA	13.0N	14.4E	12.0N	12.9E	15	LO	250	N	N	19910409	103616	246	117	80	60
88	58	NIGER	NORTH LOBE LAKE CHAD	13.9N	13.5E	11.8N	13.2E	10	LO	250	N	N	19910409	103623	246	117	80	60

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	LOW	NADIR LAT	LOW	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL	OR
88	59	CHAD	EAST LOBE LAKE CHAD, DUST	13.5N	14.5E	11.8N	13.3E	25	LO	250	N	N	19910409	103625	246	117	80	60
88	60	CAMEROON	L. CHAD, CHARI R/D, DELTA	13.0N	14.4E	11.6N	13.7E	20	LO	250	N	Y	19910409	103632	246	117	81	60
88	61	CAMEROON	L. CHAD, CHARI R/D, DELTA	13.0N	14.5E	11.5N	13.8E	15	LO	250	N	Y	19910409	103634	246	118	81	60
88	62	CHAD	CENTRAL L. CHAD, DUST	13.2N	14.3E	11.4N	14.0E	60	LO	250	N	Y	19910409	103637	246	118	81	60
88	63	CAMEROON	SOUTH LOBE L. CHAD, HAZE	12.6N	14.2E	11.2N	14.4E	25	LO	250	N	Y	19910409	103645	246	118	82	60
88	64	CAMEROON	CHARI RIVER, HAZE/SMOKE	12.4N	14.7E	11.1N	14.6E	10	LO	250	N	Y	19910409	103648	246	118	82	60
88	65	CHAD	CHARI RIVER, HAZE/SMOKE	12.2N	15.0E	11.0N	14.9E	30	LO	250	N	Y	19910409	103653	246	118	82	60
88	66	CHAD	CHARI RIVER, HAZE/SMOKE	11.7N	15.4E	10.8N	15.2E	25	LO	250	N	Y	19910409	103658	246	118	83	60
88	67	CHAD	CHARI RIVER, HAZE/SMOKE	11.5N	15.4E	10.5N	15.8E	20	LO	250	N	Y	19910409	103710	246	119	83	60
88	68	CHAD	CHARI RIVER, HAZE, MINING	11.2N	15.7E	10.3N	16.1E	0	LO	250	N	Y	19910409	103715	246	119	84	60
88	69	CHAD	CHARI RIVER, HAZE/SMOKE	10.7N	16.3E	10.1N	16.5E	30	LO	250	N	Y	19910409	103723	246	119	84	60
88	70	CHAD	CHARI RIVER, HAZE/SMOKE	10.5N	17.0E	10.0N	16.7E	30	LO	250	N	Y	19910409	103727	246	119	84	60
88	71	CHAD	CHARI RIVER, HAZE/SMOKE	10.2N	17.5E	9.9N	16.8E	60	LO	250	N	Y	19910409	103731	246	120	85	60
88	72	SENEGAL	GAMBIA R/BAY, SALOUM R/D.	13.8N	16.6W	14.4N	15.8W	0	LO	250	N	Y	19910409	120815	246	114	74	61
88	73	SENEGAL	GAMBIA R/BAY, SALOUM R/D.	13.5N	16.6W	14.1N	15.2W	0	LO	250	U	Y	19910409	120826	246	115	75	61
88	74	SENEGAL	DAKAR/PENINSULA, DARK	14.4N	17.1W	14.0N	15.0W	0	LO	250	N	N	19910409	120828	246	115	75	61
88	75	SENEGAL	CASAMANCE R., COAST, DARK	12.7N	16.6W	13.8N	14.5W	5	LO	250	U	Y	19910409	120837	246	115	75	61
88	76	GUINEA BISSAU	CASAMANCE R., RIO CACHEU	12.3N	16.1W	13.7N	14.3W	0	LO	250	U	Y	19910409	120841	246	115	76	61
88	77	GUINEA BISSAU	GEBA CANAL, DOS BIJAGOS I	11.6N	15.6W	13.6N	14.2W	0	LO	250	U	Y	19910409	120843	246	115	76	61
88	78	GUINEA BISSAU	R. GRANDE, DOS BIJAGOS IS	11.1N	15.4W	13.5N	14.0W	15	LO	250	U	N	19910409	120847	246	115	76	61
88	79	GUINEA BISSAU	RIO CASSINE, COAST	11.0N	15.1W	13.5N	13.9W	15	LO	250	U	Y	19910409	120849	246	115	76	61
88	80	GUINEA	COAST, VERY DARK			13.4N	13.8W	0	LO	250	U	N	19910409	120851	246	115	76	61
88	81	SENEGAL	AGRICULTURE, DARK			13.3N	13.6W	0	LO	250	U	N	19910409	120854	246	115	76	61
88	82	AFRICA	COAST, VERY DARK			13.1N	13.2W	10	LO	250	U	N	19910409	120901	246	115	77	61
88	83	AFRICA	COAST, VERY DARK			13.1N	13.0W	0	LO	250	U	N	19910409	120904	246	115	77	61
88	84	AFRICA	AGR., VERY DARK			13.0N	12.9W	15	LO	250	U	N	19910409	120907	246	115	77	61
88	85	AFRICA	AGR., VERY DARK			12.9N	12.7W	0	LO	250	U	N	19910409	120910	246	115	77	61
88	86	GUINEA	TOMINE R., AGR, DARK	12.2N	13.6W	12.7N	12.3W	0	LO	250	U	N	19910409	120918	246	115	78	61
88	87	GUINEA BISSAU	RIO CORUBAL, AGR, DARK	11.8N	14.2W	12.5N	12.0W	0	LO	250	U	N	19910409	120923	246	115	78	61
88	88	SENEGAL	GAMBIA R., AGR, DARK	13.2N	13.1W	12.3N	11.6W	0	LO	250	U	N	19910409	120931	246	115	79	61
88	89	MALI	BAFING R./RESERVOIR, AGR.	13.0N	10.5W	12.1N	11.2W	0	LO	250	U	N	19910409	120937	246	116	79	61
88	90	GUINEA	BAFING R., AGR.	12.1N	10.5W	12.0N	11.0W	0	NV	250	U	Y	19910409	120942	246	116	79	61
88	91	GUINEA	BAFING R., AGR.	11.6N	10.8W	11.9N	10.8W	0	NV	250	U	Y	19910409	120945	246	116	80	61
88	92	GUINEA	HILLS, AGR, DARK			11.9N	10.7W	0	LO	250	U	N	19910409	120947	246	116	80	61
88	93	GUINEA	TINKISSO RIVER, AGR, DARK	11.4N	10.0W	11.7N	10.5W	0	NV	250	U	Y	19910409	120951	246	116	80	61
88	94	GUINEA	TINKISSO R., NIGER R., DARK	11.2N	9.6W	11.6N	10.2W	0	NV	250	U	Y	19910409	120956	246	116	80	61
88	95	GUINEA	TINKISSO R., NIGER R., AGR.	11.1N	9.2W	11.4N	9.8W	0	NV	250	U	Y	19910409	121004	246	116	81	61
88	96	GUINEA	NIGER R., MILO R., AGR, DARK	10.7N	9.2W	11.2N	9.4W	5	NV	250	U	Y	19910409	121010	246	116	81	61
88	97	GUINEA	NIGER R., FIE R., AGR, DARK	11.3N	9.0W	10.8N	8.6W	5	NV	250	U	Y	19910409	121025	246	116	82	61
88	98	MALI	NIGER R., BALE R./RESERVOIR	11.5N	8.2W	10.6N	8.3W	20	NV	250	U	N	19910409	121031	246	116	83	61

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL	OR
88	99	GUINEA	NIGER R, MILO R, AGR, DARK	10.8N 9.2W	10.3N 7.8W	5	LO	250	U	N	19910409	121041	246	116	83	61
88	100	GUINEA	SANKARANI R, TRIBUTARY, DK	10.0N 8.5W	10.2N 7.6W	0	LO	250	U	N	19910409	121044	246	116	83	61
88	101	MALI	NIGER R, BANI R, FALA R.	13.4N 6.3W	9.9N 6.9W	0	LO	250	N	Y	19910409	121056	246	117	84	61
88	102	MALI	NIGER R, BAOULE R.	13.0N 7.3W	9.8N 6.8W	15	LO	250	N	Y	19910409	121059	246	117	84	61
88	103	MALI	BANI RIVER, DARK	13.0N 5.2W	9.5N 6.1W	0	LO	250	U	N	19910409	121111	246	117	85	61
88	104	IVORY COAST	AGRICULTURE, DARK		9.4N 6.0W	0	LO	250	U	N	19910409	121113	246	117	85	61
88	105	IVORY COAST	AGRICULTURE, DARK		9.3N 5.9W	5	LO	250	U	N	19910409	121115	246	117	85	61
88	106	IVORY COAST	AGRICULTURE, DARK		9.2N 5.8W	5	LO	250	U	N	19910409	121118	246	117	86	61
88	107	IVORY COAST	BANDANA BLANC R, AGR, DARK	8.8N 5.5W	9.0N 5.3W	25	NV	250	U	Y	19910409	121127	246	117	86	61
88	108	IVORY COAST	AGRICULTURE, DARK		8.7N 4.7W	50	LO	250	U	Y	19910409	121138	246	117	87	61
88	109	IVORY COAST	KOMO R, AGR, DARK	8.5N 4.0W	8.5N 4.5W	20	NV	250	U	Y	19910409	121142	246	117	87	61
88	110	IVORY COAST	KOMO R, AGR, DARK	8.0N 4.0W	8.4N 4.3W	60	NV	250	U	Y	19910409	121146	246	117	87	61
88	111	IVORY COAST	AGR, DARK, CLOUDS		8.0N 3.5W	85	LO	250	U	N	19910409	121200	246	118	88	61
88	112	IVORY COAST	KOMOE R, AGR, V, DARK	7.2N 3.7W	7.6N 2.8W	40	LO	250	U	Y	19910409	121213	246	120	89	61
88	113	IVORY COAST	KOMOE R, AGR, V, DARK	6.9N 3.6W	7.5N 2.7W	50	LO	250	U	Y	19910409	121216	246	123	89	61
88	114	IVORY COAST	AGR, V, DARK, CLOUDS		7.4N 2.5W	85	LO	250	U	Y	19910409	121220	246	284	89	61
88	115	GHANA	AGR, V, DARK		7.2N 2.1W	40	LO	250	U	N	19910409	121226	246	295	89	61
88	116	GHANA	AGR, V, DARK		7.2N 2.0W	30	LO	250	U	N	19910409	121228	246	296	89	61
88	117	GHANA	AGR, V, DARK		7.1N 1.8W	35	LO	250	U	N	19910409	121232	246	296	89	61
88	118	GHANA	AGR, V, DARK		6.9N 1.6W	75	LO	250	U	N	19910409	121237	246	296	88	61
88	119	GHANA	AGR, V, DARK, CLOUDS		6.8N 1.3W	90	LO	250	U	N	19910409	121242	246	297	88	61
88	120	GHANA	AGR, V, DARK, CLOUDS		6.6N 0.9W	90	LO	250	U	N	19910409	121249	246	297	88	61
88	121	GHANA	VOLTA R/DELTA, COAST		5.8N 0.5E	25	NV	250	U	N	19910409	121316	246	297	86	61
89	1	KENYA	L. VICTORIA, KAVIRONDO G.	0.2S 34.3E	0.2S 32.7E	25	LO	250	N	N	19910408	112135	245	288	66	45
89	2	KENYA	L. VICTORIA, SIGULU I.	0.3N 33.5E	0.3S 32.8E	65	LO	250	U	N	19910408	112137	245	288	66	45
89	3	ZAIRE	LAKE ALBERT, ALBERT NILE	2.1N 31.3E	0.4S 33.1E	80	LO	250	U	Y	19910408	112142	245	288	66	45
89	4	ZAIRE	LAKE ALBERT, CLOUDS	1.2N 30.4E	0.6S 33.4E	80	LO	250	U	Y	19910408	112149	245	288	65	45
89	5	ZAIRE	LAKE ALBERT, CLOUDS	1.6N 30.7E	0.7S 33.5E	80	LO	250	U	Y	19910408	112151	245	288	65	45
89	6	KENYA	L. VICTORIA, KAVIRONDO G.	0.4S 34.4E	0.9S 33.8E	25	LO	250	N	N	19910408	112156	245	288	65	45
89	7	UGANDA	L. VICTORIA, SESE ISLANDS	0.0 32.3E	1.1S 34.2E	40	LO	250	N	Y	19910408	112203	245	288	64	45
89	8	UGANDA	L. VICTORIA, SESE ISLANDS	0.6S 32.0E	1.1S 34.3E	40	LO	250	N	Y	19910408	112205	245	289	64	45
89	9	UGANDA	L. VICTORIA, SESE ISLANDS	0.9S 32.4E	1.2S 34.4E	40	LO	250	N	Y	19910408	112207	245	289	64	45
89	10	KENYA	LAKE VICTORIA, CLOUDS	1.0S 34.0E	1.3S 34.6E	85	NV	250	N	Y	19910408	112212	245	289	64	45
89	11	KENYA	L. VICTORIA, MFANGANO I.	0.6S 34.1E	1.4S 34.8E	75	NV	250	N	Y	19910408	112215	245	289	64	45
89	12	KENYA	L. VICTORIA, KAVIRONDO G.	0.3S 34.5E	1.6S 35.0E	40	NV	250	N	Y	19910408	112219	245	289	63	45
89	13	TANZANIA	LAKE NATRON	2.4S 35.9E	1.8S 35.4E	20	LO	250	N	Y	19910408	112226	245	289	63	45
89	14	TANZANIA	LAKE NATRON	2.1S 36.0E	1.9S 35.7E	15	LO	250	N	Y	19910408	112232	245	289	63	45
89	15	KENYA	AGR. VALLEY, ROAD	1.1S 36.0E	2.4S 36.5E	15	LO	250	N	Y	19910408	112247	245	289	62	45
89	16	KENYA	NGIRO STREAM, L. MAGADI	1.5S 36.1E	2.5S 36.6E	10	LO	250	N	Y	19910408	112249	245	289	61	45
89	17	TANZANIA	L. NATRON, L. MAGADI	2.4S 36.2E	2.5S 36.7E	30	NV	250	N	Y	19910408	112251	245	289	61	45

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	CENTER LON	MADIR LAT	MADIR LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
89	18	TANZANIA	L. MANYARA, L. BURUNGI	3.6S	36.9E	2.6S	36.8E	50	LO	250	N	Y	19910408	112254	245	289	61	45
89	19	TANZANIA	L. MANYARA, L. BURUNGI	3.4S	36.9E	2.7S	37.0E	50	LO	250	N	Y	19910408	112257	245	289	61	45
89	20	TANZANIA	MOSHI, AFLD, KIKULEIWA RES	3.5S	37.2E	2.8S	37.1E	60	LO	250	N	Y	19910408	112300	245	289	61	45
89	21	TANZANIA	MOSHI, KIKULEIWA RES.	3.5S	37.5E	2.9S	37.3E	75	NV	250	N	Y	19910408	112303	245	289	61	45
89	22	KENYA	MT. KILIMANJARO, CLD COV.	2.9S	37.7E	3.1S	37.7E	75	NV	250	N	Y	19910408	112310	245	290	60	45
89	23	TANZANIA	L. NATRON, SUNGLINT	2.5S	36.0E	3.3S	38.0E	20	LO	250	N	Y	19910408	112317	245	290	60	45
89	24	TANZANIA	L. NATRON, SUNGLINT	2.5S	36.0E	3.4S	38.2E	25	LO	250	N	Y	19910408	112320	245	290	59	45
89	25	TANZANIA	LAKE NATRON	2.3S	36.0E	3.6S	38.5E	30	LO	250	U	Y	19910408	112326	245	290	59	45
89	26	TANZANIA	KIKULEIWA RESERVOIR	3.6S	37.4E	3.9S	39.0E	85	LO	250	U	N	19910408	112335	245	290	59	45
89	27	TANZANIA	LAKE AMBUSSEL	4.0S	37.3E	3.9S	39.1E	85	LO	250	N	Y	19910408	112337	245	290	58	45
89	28	TANZANIA	PLAINS, MOUNTAINS			4.0S	39.2E	85	LO	250	U	N	19910408	112340	245	290	58	45
89	29	TANZANIA	ZANZIBAR, ZANZIBAR ISLAND	6.2S	39.0E	4.2S	39.5E	15	LO	250	U	N	19910408	112345	245	290	58	45
89	30	TANZANIA	ZANZIBAR I, PEMBA I, CST.	5.5S	39.3E	4.3S	39.7E	20	LO	250	U	N	19910408	112348	245	290	58	45
89	31	TANZANIA	PEMBA I/CHANNEL, COAST	4.9S	39.4E	4.3S	39.8E	20	NV	250	U	N	19910408	112350	245	290	58	45
89	32	KENYA	MOMBASA, AFLD, COAST	4.2S	39.7E	4.4S	39.9E	30	NV	250	U	N	19910408	112353	245	290	57	45
89	33	KENYA	GALANA R, COAST	3.5S	40.0E	4.5S	40.1E	25	NV	250	N	Y	19910408	112356	245	290	57	45
89	34	KENYA	TANA RIVER, CLOUDS	1.7S	39.9E	4.7S	40.5E	85	LO	250	N	Y	19910408	112404	245	290	57	45
89	35	KENYA	FORMOSA BAY, TANA RIVER	2.6S	40.2E	4.8S	40.6E	50	LO	250	N	Y	19910408	112406	245	290	57	45
89	36	KENYA	FORMOSA BAY, PATE I, CST	2.3S	40.7E	5.0S	40.9E	60	LO	250	U	N	19910408	112412	245	290	56	45
89	37	MADAGASCAR	EAST COAST	14.0S	50.1E	12.2S	54.2E	80	LO	250	U	N	19910408	112820	245	290	40	45
89	38	MADAGASCAR	EAST COAST	15.2S	50.6E	12.5S	54.8E	80	LO	250	U	N	19910408	112831	245	290	40	45
89	39	RODRIGUES	ENTIRE ISLAND/CORAL REEF	19.7S	63.3E	17.4S	65.2E	60	LO	250	N	Y	19910408	113135	244	288	28	45
89	40	ZAIRE	L. UPEMBA, L. LUKANGA	8.5S	26.5E	11.0S	28.0E	60	LO	250	U	Y	19910408	130106	245	291	44	46
89	41	ZAIRE	L. KABAMBA, LUALABA R.	7.9S	26.9E	11.2S	28.5E	60	LO	250	U	Y	19910408	130112	245	291	43	46
89	42	ZAMBIA	LAKE MWERU	9.2S	28.4E	11.4S	28.6E	70	LO	250	U	Y	19910408	130117	245	291	43	46
89	43	ZAMBIA	LAKE MWERU	9.1S	28.8E	11.5S	28.8E	40	LO	250	U	Y	19910408	130121	245	291	43	46
89	44	ZAIRE	LAKE MWERU	8.4S	29.0E	11.7S	29.2E	40	LO	250	U	Y	19910408	130128	245	291	42	46
89	45	ZAMBIA	CONVECTION CELLS			12.1S	30.1E	70	LO	250	U	N	19910408	130144	245	290	41	46
89	46	MALAWI	L. NYASA-NORTH END	9.8S	33.8E	13.0S	31.9E	75	LO	250	U	Y	19910408	130216	245	290	39	46
89	47	MALAWI	L. NYASA-NO. END	10.4S	34.0E	13.1S	32.1E	75	LO	250	U	Y	19910408	130221	245	290	39	46
89	48	MADAGASCAR	MANAMBOLO R, COAST	19.2S	44.3E	18.9S	44.9E	40	NV	250	U	N	19910408	130606	244	287	24	46
89	49	MADAGASCAR	TSIRIBITHINA R/DELTA	19.8S	44.5E	19.1S	45.5E	60	NV	250	U	N	19910408	130615	244	287	24	46
89	50	MADAGASCAR	TSIRIBITHINA R, SAKENY R.	19.8S	45.4E	19.3S	45.9E	50	NV	250	U	N	19910408	130623	244	287	23	46
89	51	MADAGASCAR	SAKENY RIVER	20.4S	45.6E	19.4S	46.2E	40	LO	250	U	N	19910408	130628	244	287	23	46
89	52	MADAGASCAR	MOUNTAINS			19.7S	47.0E	60	LO	250	U	N	19910408	130640	244	286	22	46
89	53	MADAGASCAR	MOUNTAINS			20.0S	47.6E	60	LO	250	U	N	19910408	130651	244	286	21	46
89	54	MADAGASCAR	MOUNTAINS			20.0S	47.8E	80	LO	250	U	N	19910408	130654	244	286	21	46
89	55	MADAGASCAR	MOUNTAINS			20.1S	48.0E	80	LO	250	U	Y	19910408	130657	244	286	21	46
89	56	MADAGASCAR	MOUNTAINS			20.2S	48.1E	70	LO	250	U	Y	19910408	130700	244	286	21	46
89	57	MADAGASCAR	MOUNTAINS			20.4S	48.7E	70	LO	250	U	N	19910408	130709	244	286	20	46

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
89	58	MADAGASCAR	MANGORO R, COAST, MTNS	20.0S 48.8E	21.0S 50.4E	30	LO	250	U	N	19910408	130738	244	285	18	46
89	59	NICARAGUA	L.MANAGUA, L.NICARAGUA	12.0N 86.0W	12.5N 85.5W	35	NV	250	U	N	19910408	172820	248	142	83	49
89	60	NICARAGUA	L.MANAGUA, MASAYA VOLC.	12.3N 86.3W	12.4N 85.2W	40	NV	250	U	N	19910408	172824	248	143	83	49
89	61	COSTA RICA	L.NICARAGUA, MT. OROSI	11.0N 85.5W	12.2N 85.0W	25	LO	250	U	N	19910408	172829	248	144	83	49
89	62	PANAMA	PANAMA CANAL, COLON	9.2N 79.8W	8.2N 77.5W	75	LO	250	U	N	19910408	173047	248	255	85	49
89	63	PANAMA	PANAMA CANAL, COLON	8.9N 79.9W	8.0N 77.1W	75	LO	250	U	N	19910408	173055	248	259	85	49
89	64	PANAMA	PANAMA CANAL, COLON	9.0N 80.0W	7.6N 76.4W	75	LO	250	U	N	19910408	173108	248	264	84	49
89	65	PANAMA	PANAMA CANAL, COLON	8.5N 79.9W	7.5N 76.2W	80	LO	250	U	N	19910408	173111	248	265	84	49
89	66	COLOMBIA	CLOUD FRONT, DARK	6.5N	74.4W	80	LO	250	U	N	19910408	173146	248	274	82	49
89	67	BRAZIL	RIO NEGRO, RIO BRANCO	1.7S 61.4W	2.3S 59.3W	65	LO	250	U	N	19910408	173634	245	291	64	49
89	68	BRAZIL	RIO NEGRO, RIO BRANCO	1.4S 61.8W	2.4S 59.0W	70	LO	250	U	N	19910408	173640	245	291	63	49
89	69	BRAZIL	RIO JAUAPERI, RIO BRANCO	1.0S 61.7W	2.5S 58.9W	60	LO	250	U	N	19910408	173642	245	291	63	49
89	70	BRAZIL	ROADS, AGR, HILLS	10.4S	44.9W	80	LO	250	U	N	19910408	174106	245	292	46	49
89	71	BRAZIL	RIO GURGUEIA, ROADS	9.7S 45.0W	10.6S 44.5W	85	NV	250	U	N	19910408	174114	245	292	46	49
89	72	BRAZIL	RIO GURGUEIA, L.PARNAGUA	9.9S 44.8W	10.8S 44.1W	85	NV	250	U	N	19910408	174121	245	292	45	49
89	73	BRAZIL	RIO GURGUEIA, L.PARNAGUA	10.2S 44.7W	11.0S 43.7W	85	NV	250	U	N	19910408	174128	245	292	45	49
89	74	BRAZIL	RIO SAO FRANCISCO	10.0S 42.2W	11.6S 42.6W	80	LO	250	U	N	19910408	174148	245	292	44	49
89	75	BRAZIL	RIO SAO FRANCISCO	11.0S 43.0W	11.9S 41.9W	85	LO	250	U	N	19910408	174201	245	291	43	49
89	76	BRAZIL	RIO SAO FRANCISCO	10.8S 42.6W	12.0S 41.8W	85	LO	250	U	N	19910408	174204	245	291	43	49
89	77	BRAZIL	RIO SAO FRANCISCO	11.8S 43.3W	12.4S 41.0W	75	LO	250	U	N	19910408	174218	245	291	42	49
89	78	BRAZIL	RIO CONTAS, SRA SINCORA	14.0S 41.5W	12.7S 40.3W	50	LO	250	U	N	19910408	174230	245	291	41	49
89	79	BRAZIL	RIO CONTAS, SRA SINCORA	14.1S 41.1W	12.9S 40.1W	50	LO	250	U	N	19910408	174235	245	291	41	49
89	80	BRAZIL	RIO CONTAS, HILLS, AGR	13.9S 40.8W	13.2S 39.3W	75	LO	250	U	N	19910408	174248	245	291	40	49
89	81	BRAZIL	RIO CONTAS, HILLS, AGR	13.9S 40.4W	13.3S 39.1W	80	LO	250	U	N	19910408	174252	245	291	40	49
89	82	BRAZIL	COAST	13.4S 39.0W	13.7S 38.3W	75	NV	250	U	N	19910408	174306	245	291	39	49
89	83	PARAGUAY	DARK, CLOUDS	24.9S	55.7W	50	LO	250	U	N	19910408	205830	244	281	7	51
89	84	PARAGUAY	DARK	25.1S	54.9W	5	LO	250	U	N	19910408	205843	244	281	6	51
89	85	PARAGUAY	DARK	25.3S	54.2W	20	LO	250	U	N	19910408	205854	244	280	6	51
89	86	BRAZIL	DARK	25.5S	53.2W	5	LO	250	U	N	19910408	205908	244	280	5	51
89	87	LINE ISLANDS	CHRISTMAS I, CLD COVER	1.9N 157.3W	0.5S 157.8W	60	LO	250	N	N	19910408	234923	245	292	69	53
89	88	LINE ISLANDS	MALDEN ISLAND	4.0S 155.0W	3.8S 152.1W	15	LO	250	N	N	19910408	235111	245	293	62	53
89	89	MARQUESAS ISLANDS	NUKU HIVA, DARK	8.9S 140.1W	10.2S 140.8W	35	LO	250	U	N	19910408	235445	245	293	49	53
89	90	MARQUESAS ISLANDS	UA POU, DARK	9.4S 140.0W	10.3S 140.6W	35	LO	250	U	N	19910408	235449	245	293	48	53
89	91	MARQUESAS ISLANDS	HIVA OA, TAHUATA, DARK	9.9S 139.1W	10.8S 139.6W	50	LO	250	U	N	19910408	235506	245	293	47	53
89	92	MARQUESAS ISLANDS	FATU IVA, DARK	10.5S 138.6W	11.3S 138.6W	50	LO	250	U	N	19910408	235526	245	293	46	53
89	93	AUSTRALIA-NT	PALMER R, JAMES RANGES	24.2S 132.2E	24.4S 135.2E	5	LO	250	U	N	19910409	075153	244	284	12	58
89	94	AUSTRALIA-NT	FINKE R, KRICHAUFF RANGES	24.2S 13.0E	24.5S 135.4E	5	LO	250	U	N	19910409	075156	244	284	12	58
89	95	AUSTRALIA-NT	SIMPSON DESERT, DARK	24.7S	136.1E	0	LO	250	U	N	19910409	075207	244	283	11	58
89	96	AUSTRALIA-NT	SIMPSON DESERT, DARK	24.8S	136.6E	0	LO	250	U	N	19910409	075215	244	283	11	58
89	97	ALGERIA	TASSILI N'AJJER-EAST END	23.0N	10.3E	0	LO	250	U	N	19910409	085517	246	108	51	59

TABLE 4-3- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL	OR
89	98	NIGER	DESERT-DUNE FIELD		22.5N 12.0E	0	LO	250	N	N	19910409	085544	246	108	53	59
89	99	NIGER	PLATEAU DU JADO AREA		22.2N 12.8E	0	LO	250	N	N	19910409	085558	246	109	54	59
89	100	NIGER	PLAT.DU JADO,ACHELOUMO W	22.3N	22.1N 13.1E	0	LO	250	N	N	19910409	085603	246	109	54	59
89	101	NIGER	PLAT.DU JADO,ACHELOUMO W	22.0N	22.1N 13.3E	0	NV	250	N	N	19910409	085605	246	109	54	59
89	102	LIBYA	PLAT.MANGENI AREA	22.8N	22.0N 13.4E	0	LO	250	N	N	19910409	085608	246	109	54	59
89	103	LIBYA	EDGE-MARZUQ SAND SEA	23.2N	22.0N 13.6E	0	LO	250	N	N	19910409	085610	246	109	54	59
89	104	NIGER	DESERT		21.9N 13.8E	0	LO	250	N	N	19910409	085614	246	109	55	59
89	105	NIGER	WIND EROSION, DESERT	22.5N	21.8N 14.1E	0	LO	250	N	N	19910409	085618	246	109	55	59
89	106	NIGER	MASSIF DAFIFI,WIND EROSN	22.5N	21.7N 14.2E	0	LO	250	N	Y	19910409	085621	246	109	55	59
89	107	NIGER	MASSIF DAFIFI,WIND EROSN	22.0N	21.7N 14.4E	0	LO	250	N	Y	19910409	085623	246	109	55	59
89	108	NIGER	PLAT.TCHIGAI,WIND EROSN	21.5N	21.6N 14.5E	0	LO	250	N	Y	19910409	085626	246	109	55	59
89	109	CHAD	TIBESTI AREA-WEST SIDE	21.4N	21.6N 14.7E	0	LO	250	N	Y	19910409	085628	246	109	56	59
89	110	CHAD	TIBESTI AREA-WEST SIDE	21.4N	21.5N 14.8E	0	LO	250	N	Y	19910409	085631	246	109	56	59
89	111	CHAD	TIBESTI AREA-WEST SIDE	21.4N	21.5N 15.0E	0	LO	250	N	Y	19910409	085633	246	110	56	59
89	112	CHAD	TIBESTI AREA-WEST SIDE	21.6N	21.4N 15.1E	0	LO	250	N	Y	19910409	085635	246	110	56	59
89	113	CHAD	MASSIF D'ABO,N.TIBESTI	21.7N	21.4N 15.2E	0	LO	250	N	N	19910409	085637	246	110	56	59
89	114	CHAD	TIBESTI MTNS,PIC TOUSIDE	21.0N	21.0N 16.4E	0	NV	250	N	Y	19910409	085657	246	110	57	59
89	115	CHAD	TIBESTI MTNS,VOLC.CRATER	20.9N	20.9N 16.8E	0	NV	250	N	Y	19910409	085700	246	110	58	59
89	116	CHAD	TIBESTI MTNS,OLD CRATER	20.4N	20.9N 16.7E	0	LO	250	N	Y	19910409	085702	246	110	58	59
89	117	CHAD	TIBESTI,TARSO TOON VOLC.	20.8N	20.8N 16.8E	0	LO	250	N	Y	19910409	085704	246	110	58	59
89	118	CHAD	TIBESTI,TARSO TOON VOLC.	21.0N	20.8N 17.0E	0	NV	250	N	Y	19910409	085707	246	110	58	59
89	119	CHAD	TIBESTI,NO.PIC TOUSIDE	21.4N	20.7N 17.2E	0	NV	250	N	Y	19910409	085710	246	110	58	59
89	120	CHAD	TIBESTI,NE. PIC TOUSIDE	21.7N	20.6N 17.3E	0	LO	250	N	Y	19910409	085712	246	110	58	59
89	121	CHAD	TIBESTI,WADI ZUMRI	21.1N	20.6N 17.4E	0	LO	250	N	Y	19910409	085714	246	111	58	59
89	122	CHAD	TIBESTI, EAST SLOPE	21.0N	20.6N 17.6E	0	LO	250	N	N	19910409	085716	246	111	59	59
90	1	EGYPT	GILF KEBIR PLAT,SAND STM	23.5N	23.5N 26.7E	0	LO	250	N	N	19910406	091633	246	137	67	13
90	2	EGYPT	E-W ROCK RIDGE,G. KEBIR	23.5N	23.2N 27.9E	0	NV	250	N	N	19910406	091652	246	139	68	13
90	3	EGYPT	GILF KEBIR PLAT,SAND STM	23.5N	23.0N 28.6E	0	LO	250	N	N	19910406	091703	246	141	69	13
90	4	EGYPT	LAKE MASSER	22.5N	22.1N 31.3E	0	NV	250	N	N	19910406	091747	245	147	71	13
90	5	SUDAN	LAKE MASSER,NILE RIVER	21.5N	22.0N 31.7E	10	NV	250	N	N	19910406	091753	245	147	71	13
90	6	SUDAN	LAKE MASSER,NILE RIVER	21.8N	21.8N 32.2E	0	LO	250	N	N	19910406	091802	245	149	72	13
90	7	SUDAN	LAKE MASSER,NILE RIVER	21.9N	21.4N 33.3E	0	LO	250	N	N	19910406	091820	245	152	73	13
90	8	EGYPT	NUBIAN DES,WADI ALLAQI	22.4N	21.1N 34.3E	0	LO	250	N	N	19910406	091837	245	155	73	13
90	9	SUDAN	NUBIAN DES,DOVE.MTNS.	21.7N	20.8N 35.1E	20	LO	250	N	N	19910406	091850	245	157	74	13
90	10	SUDAN	DUNGUNAB BAY/PENINSULA	21.0N	20.2N 36.8E	20	LO	250	N	N	19910406	091918	245	163	75	13
90	11	SAUDI ARABIA	JIDDAH(PART),COAST	22.0N	19.7N 37.9E	15	LO	250	N	Y	19910406	091936	245	167	76	13
90	12	SAUDI ARABIA	JIDDAH, COAST	21.3N	19.5N 38.5E	20	LO	250	N	Y	19910406	091947	245	170	76	13
90	13	SAUDI ARABIA	BARRIER REEF,COAST	20.3N	19.0N 39.8E	0	LO	250	N	N	19910406	092009	245	176	77	13
90	14	SAUDI ARABIA	FARASAN IS,RED SEA,CST	16.5N	17.7N 42.8E	10	LO	250	N	N	19910406	092100	245	191	78	13
90	15	SAUDI ARABIA	TUWAQ IRRIG. PROJECT	20.0N	17.0N 44.4E	0	LO	250	N	N	19910406	092128	245	200	78	13

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
90	16	SAUDI ARABIA	TUWAQ IRR, DUNE FIELD	19.6N 45.3E	16.6N 45.3E	0	LO	250	N	N	19910406	092144	245	206	78	13
90	17	YEMEN (ADEN)	SHIBAM, WADI SARR, W. AMD	16.0N 48.0E	16.0N 48.6E	5	LO	250	N	N	19910406	092207	244	213	78	13
90	18	YEMEN (ADEN)	PT. MUDAH, COAST	14.7N 49.0E	15.1N 48.6E	15	NV	250	N	N	19910406	092242	244	224	77	13
90	19	YEMEN (ADEN)	GHAYDAH, MAHRAT MTNS, CST.	16.6N 52.5E	14.7N 49.4E	5	LO	250	N	N	19910406	092256	244	228	77	13
90	20	YEMEN (ADEN)	PT. SHARWAYN, W. MASILAH	15.0N 51.0E	13.7N 51.5E	30	LO	250	N	N	19910406	092334	244	238	76	13
90	21	SOCOTRA	ENTIRE ISLAND	12.3N 53.8E	10.9N 57.1E	15	LO	250	N	N	19910406	092515	244	256	71	13
90	22	MALDIVES	MALCOLM ATOLL, KOFENBE I	6.2N 72.6E	3.7N 69.9E	50	LO	250	U	N	19910406	092917	243	276	58	13
90	23	MALDIVES	ARI ATOLL, HULULE, RASDU A	3.9N 72.9E	3.2N 70.7E	50	LO	250	U	N	19910406	092932	243	276	57	13
90	24	MALDIVES	KOLUMADULU A, HADDUMMATI	2.3N 73.2E	2.6N 71.8E	35	LO	250	U	N	19910406	092952	243	277	56	13
90	25	MALDIVES	SUVAADIVA ATOLL	0.6N 73.2E	1.0N 74.6E	30	LO	250	N	N	19910406	093046	243	279	53	13
90	26	MALDIVES	SUVAADIVA ATOLL	0.5N 73.2E	0.7N 75.1E	30	LO	250	N	N	19910406	093056	243	279	52	13
90	27	WESTERN SAHARA	TINDOUF SYNCLINE, HAMRA W	26.9N 11.4W	26.8N 11.3W	5	NV	250	N	N	19910406	104622	246	119	54	14
90	28	MOROCCO	SEBKHA TAN, COAST	27.8N 12.7W	26.7N 10.7W	5	LO	250	N	N	19910406	104630	246	120	55	14
90	29	NIGERIA	LAKE CHAD	13.0N 14.0E	19.4N 14.8E	45	LO	250	N	N	19910406	105316	245	168	76	14
90	30	NIGER	LAKE CHAD, KOMADOUGOU R.	13.7N 13.4E	19.0N 16.0E	5	LO	250	N	N	19910406	105336	245	173	77	14
90	31	CHAD	TIBESTI MTNS, ENI KOUSSI	19.7N 18.7E	18.4N 17.3E	0	LO	250	N	N	19910406	105359	245	180	77	14
90	32	CHAD	TIBESTI, AOROUNGA CRATER	19.1N 19.4E	18.3N 17.6E	0	LO	250	N	N	19910406	105404	245	182	78	14
90	33	CHAD	TIBESTI MTNS, PIC TOUSIDE	21.0N 16.5E	17.8N 18.8E	0	LO	250	N	N	19910406	105425	245	188	78	14
90	34	WESTERN SAHARA	RIO DE ORO PEN, COAST	23.3N 16.0W	22.2N 16.8W	0	LO	250	O	Y	19910406	122435	245	143	70	15
90	35	WESTERN SAHARA	RIO DE ORO PEN, COAST	23.5N 15.9W	21.9N 16.0W	0	LO	250	O	Y	19910406	122448	245	145	71	15
90	36	MAURITANIA	AZEFAL DNE, RCK OUTCRPS	22.0N 13.0W	21.3N 14.1W	0	LO	250	N	N	19910406	122519	245	150	73	15
90	37	MAURITANIA	RICHAT STRUCTURE	21.2N 11.5W	20.9N 13.1W	0	LO	250	N	N	19910406	122535	245	152	73	15
90	38	MAURITANIA	SEBKHA DE CHEMCHANE	21.0N 12.2W	20.7N 12.4W	0	NV	250	N	N	19910406	122547	245	154	74	15
90	39	MAURITANIA	RICHAT STRUCTURE	21.1N 11.3W	20.4N 11.6W	0	LO	250	N	N	19910406	122600	245	157	74	15
90	40	NIGERIA	KANO, AFLDS, RDS, RESERV.	12.5N 8.5E	11.5N 8.2E	5	LO	250	N	N	19910406	123147	244	252	73	15
90	41	NIGERIA	KOMADOUGOU YOBE/GANA R.	12.8N 11.4E	10.5N 10.0E	0	LO	250	N	N	19910406	123220	244	257	72	15
90	42	NIGERIA	L. CHAD, KANMADOUGOU R.	13.5N 13.5E	10.1N 10.7E	0	LO	250	N	N	19910406	123233	244	259	71	15
90	43	NIGERIA	LAKE CHAD	13.0N 14.0E	10.1N 10.9E	40	LO	250	N	N	19910406	123236	243	259	71	15
90	44	CAMEROON	LAKE CHAD, CHARI RIVER	12.5N 14.5E	10.0N 11.0E	65	LO	250	N	N	19910406	123239	243	260	71	15
90	45	TANZANIA	VERY DARK	1.4S 30.9E	1.4S 30.9E	40	LO	250	U	N	19910406	123856	243	281	49	15
90	46	TANZANIA	L. VICTORIA-SOUTH COAST	2.5S 32.5E	1.5S 31.2E	50	LO	250	U	N	19910406	123901	243	281	49	15
90	47	TANZANIA	L. VICTORIA-SPEKE GULF	2.5S 33.5E	1.7S 31.4E	50	LO	250	U	N	19910406	123906	243	281	48	15
90	48	TANZANIA	L. VICTORIA-EAST COAST	1.5S 33.5E	1.8S 31.6E	50	LO	250	U	N	19910406	123909	243	281	48	15
90	49	TANZANIA	L. VICTORIA-WEST COAST	1.7S 31.8E	2.0S 31.9E	50	NV	250	U	Y	19910406	123916	242	281	48	15
90	50	TANZANIA	L. VICTORIA-SOUTH COAST	2.1S 31.8E	2.1S 32.1E	70	NV	250	U	Y	19910406	123919	242	281	47	15
90	51	TANZANIA	L. VICTORIA-SOUTH COAST	2.5S 32.5E	2.2S 32.4E	65	NV	250	U	Y	19910406	123924	242	281	47	15
90	52	TANZANIA	L. VICTORIA-MWANZA/GULF	2.5S 33.0E	2.4S 32.6E	60	NV	250	U	Y	19910406	123928	242	282	47	15
90	53	TANZANIA	L. VICTORIA-SPEKE GULF	2.5S 33.5E	3.3S 34.2E	60	LO	250	U	N	19910406	123959	242	282	45	15
90	54	TANZANIA	LAKE EYASI	3.6S 34.7E	3.5S 34.6E	60	NV	250	U	N	19910406	124006	242	282	45	15
90	55	TANZANIA	LAKE NATRON	2.5S 36.0E	4.4S 36.1E	50	LO	250	U	N	19910406	124036	242	283	43	15

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	NADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
90	56	TANZANIA	TANGA, COAST, PEMBA CHAN.	5.0S 39.0E	5.5S 38.0E	35	LO	250	U	N	19910406	124112	242	283	41	15
90	57	TANZANIA	TANGA, COAST, PEMBA CHAN.	5.1S 39.3E	6.3S 39.4E	30	LO	250	U	N	19910406	124139	242	283	39	15
90	58	TANZANIA	ZANZIBAR/ISLAND/CHANNEL	6.0S 39.5E	6.4S 39.7E	15	NV	250	U	N	19910406	124143	242	283	39	15
90	59	TANZANIA	DAR ES SALAAM, COAST	7.0S 39.5E	8.7S 40.2E	30	LO	250	U	N	19910406	124153	242	283	38	15
90	60	SIERRA LEONE	FOREST FIRES		9.3N 11.7W	60	LO	250	U	N	19910406	140627	243	262	70	16
90	61	LIBERIA	LAKE PISO, CAPE MOUNT, CST	6.8N 11.5W	7.4N 8.1W	50	LO	250	U	N	19910406	140733	243	268	67	16
90	62	LIBERIA	COAST	5.5N 9.5W	6.8N 7.0W	65	LO	250	U	N	19910406	140754	243	270	65	16
90	63	IVORY COAST	KOSSOU RESERVOIR	7.5N 5.5W	6.1N 5.9W	70	LO	250	U	N	19910406	140815	243	271	64	16
90	64	ANGOLA	CABINDE, AFLD, COAST	5.5S 12.5E	3.2S 10.1E	75	LO	250	U	N	19910406	141321	242	282	46	16
90	65	ZAIRE	CONGO RIVER	5.0S 14.0E	3.5S 10.6E	50	LO	250	U	N	19910406	141330	242	282	45	16
90	66	CONGO	VERY DARK		4.4S 12.2E	75	LO	250	U	N	19910406	141400	242	283	43	16
90	67	ANGOLA	DOS TIGRES I, NAMIB DES.	17.0S 12.0E	8.2S 18.9E	50	HO	250	U	N	19910406	141608	242	284	35	16
90	68	ANGOLA	RIO CUANGO/HILLS	10.0S 18.5E	8.5S 19.6E	70	LO	250	U	N	19910406	141620	242	284	35	16
90	69	ANGOLA	STREAMS, HILLS		9.0S 20.4E	70	LO	250	U	N	19910406	141636	242	284	34	16
90	70	ANGOLA	RIO CUANDO, ZAMBEZI DRAIN	15.0S 21.0E	10.3S 22.8E	80	LO	250	U	N	19910406	141720	242	284	31	16
90	71	ZAMBIA	ZAMBEZI R/TRIB. CONVERGE	15.5S 23.0E	11.2S 24.5E	80	LO	250	U	N	19910406	141751	242	283	29	16
90	72	BOTSWANA	NTWETWE PAN, DESERT	20.5S 24.5E	12.0S 26.1E	40	LO	250	U	Y	19910406	141820	242	283	27	16
90	73	BOTSWANA	SUA PAN, DESERT	20.5S 26.5E	12.1S 26.3E	50	LO	250	U	Y	19910406	141825	242	283	27	16
90	74	ZIMBABWE	LAKE KARIBA, DARK	17.5S 27.5E	12.4S 26.9E	60	LO	250	U	N	19910406	141835	242	283	26	16
90	75	ZIMBABWE	SHANGANI/GWAI R-BASIN, DK	19.5S 28.0E	12.6S 27.2E	50	LO	250	U	N	19910406	141840	242	283	26	16
90	76	ZIMBABWE	LAKE KARIBA, DARK	17.0S 28.5E	13.0S 28.1E	35	LO	250	U	N	19910406	141857	242	283	25	16
90	77	ZAMBIA	LUANGWA RIVER, DARK	12.7S 32.0E	14.8S 31.8E	50	LO	250	U	N	19910406	142003	242	283	21	16
90	78	MOZAMBIQUE	DRAINAGE BASIN, DARK		15.2S 32.7E	75	LO	250	U	N	19910406	142019	242	282	20	16
90	79	MALAWI	LAKE NYASA, DARK	12.5S 34.3E	15.7S 33.6E	7	LO	250	U	N	19910406	142036	242	282	19	16
90	80	MALAWI	SIDE OF MTN RIDGE, DARK		16.4S 35.2E	40	LO	250	U	N	19910406	142103	242	282	17	16
90	81	MOZAMBIQUE	ZAMBEZI RIVER, VERY DARK	18.0S 35.5E	16.9S 36.4E	20	LO	250	U	N	19910406	142124	242	282	16	16
90	82	MOZAMBIQUE	ZAMBEZI R, CST, VERY DARK	18.5S 36.5E	17.2S 36.9E	5	LO	250	U	N	19910406	142134	242	281	15	16
90	83	MOZAMBIQUE	VERY DARK		17.4S 37.5E	10	LO	250	U	N	19910406	142143	242	281	14	16
90	84	MOZAMBIQUE	COAST, VERY DARK	17.0S 38.5E	17.6S 38.0E	15	LO	250	U	N	19910406	142152	242	281	14	16
90	85	MOZAMBIQUE	RIO MELULI, COAST, V. DARK	16.3S 39.6E	17.9S 38.6E	15	LO	250	U	N	19910406	142202	242	281	13	16
90	86	MOZAMBIQUE	ZAMBEZI R/DELTA, COAST	18.5S 35.5E	18.3S 39.7E	10	LO	250	U	N	19910406	142221	242	281	12	16
90	87	MOZAMBIQUE	RIO PUNGUE R/DELTA, CST.	19.5S 35.0E	18.4S 40.0E	5	LO	250	U	N	19910406	142226	242	281	12	16
90	88	NAMIBIA	ETOSHA PAN & SURROUND	18.8S 16.2E	17.4S 13.6E	50	LO	250	U	Y	19910406	155510	243	281	15	17
90	89	NAMIBIA	ETOSHA PAN-NW AREA	18.6S 15.7E	17.8S 14.5E	50	LO	250	U	Y	19910406	155524	243	281	14	17
90	90	NAMIBIA	BRANDBERG INTRUSIVE, DES.	21.2S 14.6E	18.0S 15.0E	0	LO	250	U	N	19910406	155533	243	281	13	17
90	91	NAMIBIA	EBONGBERGE INTRUSIVE	21.5S 15.5E	18.2S 15.5E	0	LO	250	U	N	19910406	155542	243	281	13	17
90	92	ANGOLA	MOCAMEDES DES, RIO COROCA	15.8S 12.0E	18.8S 16.9E	60	LO	250	U	Y	19910406	155606	243	281	11	17
90	93	ANGOLA	MOCAMEDES DESERT, COAST	17.0S 12.0E	18.9S 17.2E	40	LO	250	U	Y	19910406	155611	243	280	11	17
90	94	NAMIBIA	NAMIB DESERT, COAST	18.5S 12.0E	19.0S 17.4E	30	LO	250	U	N	19910406	155615	243	280	11	17
90	95	NAMIBIA	NAMIB DES, HOANIB WADI	19.5S 13.0E	19.2S 17.9E	0	LO	250	U	N	19910406	155623	243	280	10	17



TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		NADIR		CC	TL	FL	E	S	DATE	GMI	AL	AZ	SUN	EL	OR
				LAT	LONG	LAT	LONG												
90	96	NAMIBIA	NAMIB DES. HUAB WADI, CST	21.0S	13.5E	19.3S	18.1E	0	LO	250	N	N	19910406	155627	243	280	10	17	
90	97	NAMIBIA	NAMIB DES. OMARURU WADI	22.0S	14.5E	19.4S	18.6E	0	LO	250	N	N	19910406	155634	243	280	9	17	
90	98	NAMIBIA	NAMIB DES. WALVIS BAY, CST	23.0S	14.5E	19.5S	18.9E	0	LO	250	N	N	19910406	155639	243	280	9	17	
90	99	NAMIBIA	NAMIB DES. TSAUCHAB R, CST	25.0S	15.5E	19.5S	19.7E	0	LO	250	N	N	19910406	155653	243	280	8	17	
90	100	NAMIBIA	NAMIB DES. TSAUCHAB R, CST	24.5S	15.5E	20.1S	20.4E	0	LO	250	N	N	19910406	155705	243	279	8	17	
90	101	MEXICO	GUADALAJARA, LAG. CHAPALA	21.0N	103.0W	26.4N	104.5W	0	LO	250	N	N	19910406	170040	246	119	55	18	
90	102	MEXICO	TORREON, RDS, RR, AGR.	25.5N	103.5W	26.1N	103.0W	25	LO	250	N	N	19910406	170103	246	120	56	18	
90	103	MEXICO	SIERRA MADRE, AGR.	26.5N	102.5W	25.9N	102.0W	40	LO	250	N	N	19910406	170119	246	121	57	18	
90	104	MEXICO	GUADALAJARA, LAG. CHAPALA	21.0N	103.0W	25.7N	101.0W	0	LO	250	N	N	19910406	170134	246	122	58	18	
90	105	MEXICO	YUCATAN COAST	21.5N	88.0W	22.3N	88.6W	30	LO	250	N	N	19910406	170449	246	139	69	18	
90	106	MEXICO	YUCATAN CST, COZUMEL I.	20.5N	87.0W	21.4N	85.9W	60	LO	250	N	N	19910406	170533	245	144	72	18	
90	107	GUAYANA	ESSEQUIBO R/DELTA	7.0N	58.5W	9.3N	59.4W	75	LO	250	N	N	19910406	171319	244	262	71	18	
90	108	VENEZUELA	ORINOCO R/DELTA-CLD COV.	9.0N	60.5W	9.0N	58.8W	50	LO	250	N	N	19910406	171331	244	263	71	18	
90	109	VENEZUELA	CANO MACAREO-ORINOCO DEL	9.8N	61.6W	8.6N	58.1W	70	LO	250	N	N	19910406	171343	244	264	70	18	
90	110	GUAYANA	BERBICE R, NEW AMSTERDAM	6.5N	57.5W	8.3N	57.6W	40	LO	250	N	N	19910406	171354	244	265	69	18	
90	111	SURINAM	COURANTYN R, AGR, GUYANA	6.0N	57.0W	7.7N	56.5W	45	LO	250	N	N	19910406	171414	244	267	68	18	
90	112	SURINAM	COURANTYN R, AGR, GUYANA	6.0N	57.0W	6.9N	54.9W	55	LO	250	N	N	19910406	171443	243	270	67	18	
90	113	SURINAM	BLOMMESTEIN RESERVOIR	5.0N	55.0W	6.4N	54.0W	75	LO	250	N	N	19910406	171500	243	271	66	18	
90	114	SURINAM	BLOMMESTEIN RESERVOIR	5.0N	55.0W	5.8N	53.1W	75	LO	250	N	N	19910406	171518	243	272	65	18	
90	115	SURINAM	BLOMMESTEIN RESERVOIR	5.0N	55.0W	5.3N	52.2W	80	LO	250	N	N	19910406	171535	243	273	64	18	
90	116	BRAZIL	CAPE/RIO CASIPORE, COAST	3.5N	51.0W	4.7N	51.1W	70	LO	250	N	N	19910406	171555	243	274	62	18	
90	117	FRENCH GUIANA	RIO CALCOENE, NAZARE, CST	2.6N	50.8W	4.6N	50.9W	80	LO	250	N	N	19910406	171559	243	275	62	18	
90	118	BRAZIL	RIO ARAGUARI, AMAZON DEL.	1.2N	50.1W	3.4N	48.9W	70	LO	250	N	N	19910406	171637	243	276	60	18	
90	119	BRAZIL	CAVIANA I, AMAZON DELTA	0.4N	49.6W	3.3N	48.7W	75	LO	250	N	N	19910406	171642	243	277	60	18	
90	120	BRAZIL	AMAZON RIVER	0.8S	51.2W	2.2N	46.8W	70	LO	250	N	N	19910406	171718	243	278	57	18	
90	121	BRAZIL	COAST	1.0S	47.0W	1.5N	45.6W	80	LO	250	N	N	19910406	171741	243	279	56	18	
90	122	BRAZIL	COAST	1.0S	46.0W	1.4N	45.4W	80	LO	250	N	N	19910406	171744	243	279	56	18	
91	1	PACIFIC OCEAN	EDDIES, SHEARS			21.0N	110.7W	20	LO	250	N	N	19910405	191742	245	172	75	4	
91	2	MEXICO	BAJA, SO. END, SRA GIGANTA	23.3N	109.9W	20.8N	110.1W	10	LO	250	N	N	19910405	191752	245	175	75	4	
91	3	MEXICO	COAST	18.2N	103.2W	19.1N	105.5W	20	LO	250	N	Y	19910405	191908	244	195	76	4	
91	4	MEXICO	COAST	18.5N	103.5W	19.0N	105.4W	60	LO	250	N	Y	19910405	191910	244	196	76	4	
91	5	MEXICO	COAST	19.0N	104.0W	18.9N	105.3W	80	LO	250	N	Y	19910405	191913	244	197	76	4	
91	6	MEXICO	COAST, MANZANILLO BAY	19.0N	104.5W	18.9N	105.1W	80	LO	250	N	Y	19910405	191915	244	197	76	4	
91	7	MEXICO	COAST, SRA MADRE OCCID.	19.5N	104.5W	18.8N	104.9W	90	LO	250	N	Y	19910405	191919	244	198	76	4	
91	8	MEXICO	PUNTA MITA, COAST	12.5N	105.5W	18.6N	104.5W	20	LO	250	N	Y	19910405	191926	244	200	76	4	
91	9	MEXICO	SANTIAGO/ACAPONETA BASIN	22.0N	105.5W	18.6N	104.3W	5	LO	250	N	Y	19910405	191929	244	201	76	4	
91	10	MEXICO	COAST, SHEAR LINE	17.0N	101.0W	16.6N	99.7W	10	LO	250	N	N	19910405	192049	244	224	75	4	
91	11	MEXICO	LAG. TRES PALO, AFLD, SHEAR	16.5N	99.5W	16.5N	99.5W	5	LO	250	N	N	19910405	192052	244	224	75	4	
91	12	MEXICO	LAG. CHICAHUA, COAST	15.6N	97.7W	16.4N	99.3W	0	LO	250	N	N	19910405	192056	244	225	75	4	
91	13	MEXICO	RIO COLOTEPEC, AFLD, CST.	15.5N	97.0W	16.3N	99.1W	0	LO	250	N	N	19910405	192100	244	226	75	4	

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		MADIR		CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM	OR
				LAT	LONG	LAT	LONG											
91	14	MEXICO	LAG. SUPERIOR/INFERIOR	16.0N	94.5W	15.3N	97.0W	5	LO	250	N	N	19910405	192137	244	235	74	4
91	15	MEXICO	SRA MADRE DEL SUR, CST.	15.5N	95.5W	15.2N	96.7W	25	LO	250	N	N	19910405	192141	244	236	74	4
91	16	MEXICO	RIO COLOTEPEC, COAST	15.5N	96.5W	15.1N	96.4W	10	LO	250	N	N	19910405	192147	244	237	74	4
91	17	MEXICO	MALPASO RESERVOIR	17.0N	93.5W	14.1N	94.4W	85	LO	250	N	N	19910405	192223	244	244	72	4
91	18	MEXICO	ANGOSTURA RESERVOIR	16.0N	92.5W	13.9N	94.1W	70	LO	250	N	N	19910405	192228	244	245	72	4
91	19	PACIFIC OCEAN	CURRENT STRUCTURE, SNGLT			13.6N	93.4W	5	LO	250	N	N	19910405	192240	244	247	72	4
91	20	PACIFIC OCEAN	CURRENT STRUCTURE			13.3N	92.8W	5	LO	250	N	N	19910405	192251	244	248	71	4
91	21	GUATEMALA	ANGOSTURA RESERVOIR	15.5N	92.0W	12.8N	91.7W	80	LO	250	N	N	19910405	192311	244	251	70	4
91	22	NICARAGUA	ESTERO REAL R, SWAMP	13.0N	87.0W	11.4N	89.0W	40	LO	250	N	N	19910405	192400	243	257	68	4
91	23	NICARAGUA	AGR. (7/8 BLACK FRAME)			11.2N	88.7W	50	LO	250	U	N	19910405	192407	243	258	67	4
91	24	NICARAGUA	AGR. (3/4 BLACK FRAME)			11.0N	88.2W	70	LO	250	U	N	19910405	192415	243	259	67	4
91	25	NICARAGUA	SANTA ELENA BAY, COAST	11.0N	86.0W	10.3N	87.0W	0	LO	250	N	N	19910405	192437	243	261	66	4
91	26	COSTA RICA	PAPAGAYO GULF, COAST	10.5N	86.3W	9.9N	86.3W	0	LO	250	N	N	19910405	192450	243	262	65	4
91	27	COSTA RICA	NICOYA PENINSULA	10.0N	85.5W	9.9N	86.2W	5	LO	250	N	Y	19910405	192452	243	263	65	4
91	28	COSTA RICA	NICOYA PENINSULA/GULF	10.0N	85.0W	9.8N	86.1W	5	LO	250	N	Y	19910405	192454	243	263	65	4
91	29	COSTA RICA	SAN JOSE, CLOUDS	10.0N	84.0W	9.4N	85.3W	60	LO	250	N	N	19910405	192509	243	264	64	4
91	30	PANAMA	LAGUNA CHIRIQUI, ISLANDS	9.0N	82.0W	8.8N	84.2W	50	LO	250	N	N	19910405	192529	243	266	63	4
91	31	COSTA RICA	PT. BURICA, PENINSULA	8.5N	83.0W	8.6N	83.8W	30	NV	250	N	N	19910405	192537	243	266	63	4
91	32	COSTA RICA	CST, PT UVITA	9.0N	84.0W	8.5N	83.6W	40	LO	250	N	N	19910405	192540	243	266	62	4
91	33	PANAMA	PENINSULA AZUERO	7.5N	80.5W	8.2N	83.1W	40	LO	250	N	Y	19910405	192551	243	267	62	4
91	34	PANAMA	PENINSULA AZUERO	8.0N	80.0W	7.4N	81.6W	50	LO	250	N	Y	19910405	192618	243	269	60	4
91	35	COSTA RICA	PT. BURICA, PENINSULA	8.0N	83.0W	7.0N	81.0W	30	LO	250	N	N	19910405	192630	243	270	60	4
91	36	GULF OF PANAMA	CLOUDS			6.0N	79.2W	90	LO	250	N	N	19910405	192704	243	271	58	4
91	37	PANAMA	ISLANDS, COAST, CLOUDS			5.7N	78.7W	80	LO	250	U	N	19910405	192713	243	272	57	4
91	38	COLOMBIA	COAST, CLOUDS			4.9N	77.3W	80	LO	250	N	Y	19910405	192739	243	273	56	4
91	39	COLOMBIA	COAST, CLOUDS			4.3N	76.3W	80	LO	250	N	Y	19910405	192759	243	274	55	4
91	40	COLOMBIA	COLIMA RES, ANDES, CLDS	4.0N	76.5W	3.8N	75.4W	85	LO	250	N	N	19910405	192815	243	275	54	4
91	41	COLOMBIA	RIO ARIARI, RIO AGUAPE	4.0N	74.0W	3.2N	74.3W	60	NV	250	N	N	19910405	192836	243	275	52	4
91	42	COLOMBIA	RIO ARIARI, LLANOS	3.0N	73.0W	3.1N	74.1W	40	LO	250	N	N	19910405	192840	243	276	52	4
91	43	BRAZIL	RIO NEGRO, RIO ICAMA, DARK	0.5N	67.5W	0.3N	69.4W	75	LO	250	U	N	19910405	193011	243	278	47	4
91	44	BRAZIL	RIO NEGRO, FOREST, DARK	0.5S	68.5W	0.1S	68.7W	75	LO	250	U	Y	19910405	193024	243	279	46	4
91	45	BRAZIL	RIO NEGRO, FOREST, V. DARK	0.0	67.0W	0.6S	67.9W	85	NV	250	U	Y	19910405	193039	243	279	45	4
91	46	BRAZIL	AMAZON R, FOREST, DARK	2.5S	65.5W	2.2S	65.1W	80	NV	250	N	N	19910405	193133	242	280	42	4
91	47	BRAZIL	AMAZON R, RIO JAPURA	3.0S	65.0W	2.3S	64.9W	70	LO	250	N	N	19910405	193136	242	280	42	4
91	48	BRAZIL	AMAZON RIVER	3.5S	64.5W	2.4S	64.8W	60	NV	250	N	N	19910405	193139	242	280	41	4
91	49	BRAZIL	AMAZON R, PARAMA COPEA R.	4.0S	63.5W	3.1S	63.6W	50	NV	250	N	N	19910405	193201	242	280	40	4
91	50	BRAZIL	AMAZON RIVER, FOREST	3.5S	64.5W	3.2S	63.4W	50	LO	250	N	N	19910405	193206	242	280	40	4
91	51	BRAZIL	RIO PURUS, CLOUDS	5.0S	62.5W	4.5S	61.2W	85	LO	250	N	N	19910405	193247	242	281	37	4
91	52	BRAZIL	RIO MADEIRA, CLOUDS	5.5S	60.5W	5.0S	60.3W	80	NV	250	N	Y	19910405	193304	242	281	36	4
91	53	BRAZIL	RIO MADEIRA, CLOUDS	5.0S	60.5W	5.5S	59.4W	80	NV	250	N	Y	19910405	193322	242	281	35	4

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
91	54	BRAZIL	VERY DARK, CLOUDS		8.3S 54.4W	60	LO	250	U	N	19910405	193456	242	281	29	4
91	55	BRAZIL	VERY DARK, CLOUDS		9.9S 51.5W	70	LO	250	U	N	19910405	193550	242	281	26	4
91	56	BRAZIL	VERY DARK, CLOUDS		10.2S 50.9W	70	LO	250	U	N	19910405	193601	242	281	25	4
91	57	BRAZIL	VERY DARK, CLOUDS		10.5S 50.2W	50	LO	250	U	Y	19910405	193613	242	281	24	4
91	58	BRAZIL	VERY DARK, CLOUDS		10.7S 50.0W	60	LO	250	U	Y	19910405	193617	242	281	24	4
91	59	BRAZIL	VERY DARK, CLOUDS		11.1S 49.2W	70	LO	250	U	Y	19910405	193632	242	281	23	4
91	60	BRAZIL	RIO TOCANTINS, VERY DARK	11.5S 48.5W	11.7S 48.1W	60	NV	250	U	N	19910405	193653	242	281	22	4
91	61	BRAZIL	RIO TOCANTINS, VERY DARK	12.0S 48.5W	11.8S 47.9W	40	NV	250	U	N	19910405	193657	243	281	22	4
91	62	BRAZIL	R. TOCANTINS, R. PARANA-NO.	12.5S 48.0W	11.9S 47.7W	30	NV	250	U	N	19910405	193700	243	281	22	4
91	63	BRAZIL	VERY DARK, CLOUDS		12.0S 47.5W	50	LO	250	U	N	19910405	193704	243	281	21	4
91	64	BRAZIL	VERY DARK, STREAM		12.1S 47.3W	50	LO	250	U	N	19910405	193708	243	281	21	4
91	65	BRAZIL	VERY DARK, CLOUDS		12.3S 46.8W	30	LO	250	U	N	19910405	193716	243	281	21	4
91	66	BRAZIL	VERY DARK, CLOUDS		12.6S 46.2W	50	LO	250	U	N	19910405	193727	243	281	20	4
91	67	BRAZIL	VERY DARK, CLOUDS		13.7S 44.1W	30	LO	250	U	N	19910405	193805	243	281	17	4
91	68	BRAZIL	VERY DARK, CLOUDS		14.0S 43.4W	40	LO	250	U	N	19910405	193817	243	281	17	4
91	69	BRAZIL	RIO SAO FRANCISCO, V. DARK	14.5S 43.5W	14.2S 43.1W	40	NV	250	U	N	19910405	193823	243	281	16	4
91	70	BRAZIL	VERY DARK, HILLS, CLOUDS		14.6S 42.2W	30	LO	250	U	N	19910405	193839	243	280	15	4
91	71	BRAZIL	VERY DARK, HILLS, CLOUDS		14.8S 41.9W	60	LO	250	U	N	19910405	193845	243	280	15	4
91	72	BRAZIL	VERY DARK, HILLS, CLOUDS		16.1S 38.9W	30	LO	250	U	N	19910405	193937	243	280	12	4
91	73	BRAZIL	RIO DOCE, COAST	19.5S 40.0W	17.3S 36.3W	60	LO	250	U	N	19910405	194022	243	279	9	4
91	74		BLACK, CENTER WHITE SPOT		22.8N 146.2E						19910405	203107	245	85	5	5
91	75	GALAPAGOS ISLANDS	I. FERNANDINA, I. ISABELA	0.5S 91.5W	0.6S 91.7W	40	NV	250	U	Y	19910405	210407	243	279	45	5
91	76	GALAPAGOS ISLANDS	I. ISABELA, VERY DARK	1.0S 91.0W	0.7S 91.5W	70	NV	250	U	Y	19910405	210411	243	279	45	5
91	77	GALAPAGOS ISLANDS	ISLA SANTA CRUZ, DARK	0.5S 90.5W	0.9S 91.2W	50	NV	250	U	Y	19910405	210416	243	279	45	5
91	78	GALAPAGOS ISLANDS	I. STA CRUZ, I. SAN SALVAD.	0.5S 90.5W	1.0S 91.1W	60	NV	250	U	Y	19910405	210419	243	279	45	5
91	79	GALAPAGOS ISLANDS	ISLA SAN CRISTOBAL, DARK	1.0S 89.5W	1.2S 90.7W	10	NV	250	U	N	19910405	210426	243	279	44	5
91	80	PERU	COAST	7.0S 80.0W	7.1S 80.5W	40	LO	250	N	N	19910405	210741	242	282	32	5
91	81	PERU	ANDES, CLOUDS		8.1S 78.7W	75	LO	250	N	N	19910405	210815	242	282	30	5
91	82	PERU	COAST, PUNTA LACHAY	11.0S 77.5W	9.4S 76.4W	50	LO	250	N	N	19910405	210858	242	282	27	5
91	83	PERU	ANDES, CLOUDS		9.7S 75.7W	70	LO	250	N	Y	19910405	210910	242	282	27	5
91	84	PERU	ANDES, CLOUDS		9.8S 75.5W	80	LO	250	N	Y	19910405	210914	242	282	26	5
91	85	PERU	ANDES, CLOUDS		10.0S 75.2W	60	LO	250	N	N	19910405	210920	242	282	26	5
91	86	PERU	LAKE TITICACA, DARK	16.0S 70.0W	13.4S 68.6W	70	LO	250	Y	Y	19910405	211121	243	281	19	5
91	87	PERU	LAKE TITICACA, DARK	15.5S 69.5W	13.5S 68.4W	75	LO	250	Y	Y	19910405	211124	243	281	18	5
91	88	BOLIVIA	ANDES, CLOUDS, V. DARK	14.4S 66.6W	14.4S 66.6W	75	LO	250	U	N	19910405	211157	243	281	16	5
91	89	BOLIVIA	ANDES, STREAM, CLDS, V. DARK	14.4S 66.4W	14.4S 66.4W	80	LO	250	U	N	19910405	211159	243	281	16	5
91	90	BOLIVIA	ANDES, CLDS, V. DARK	14.5S 66.3W	14.5S 66.3W	80	LO	250	U	N	19910405	211202	243	281	16	5
91	91	BOLIVIA	ANDES, CLDS, STREAM, V. DARK	14.6S 66.0W	14.6S 66.0W	75	LO	250	U	N	19910405	211206	243	281	16	5
91	92	BOLIVIA	ANDES, CLDS, STREAMS, V. DK.	15.8S 63.6W	15.8S 63.6W	75	LO	250	U	N	19910405	211249	243	280	13	5
91	93	BOLIVIA	RIO PARAPETI, VERY DARK	19.5S 62.5W	16.8S 61.4W	40	LO	250	U	N	19910405	211328	243	279	11	5

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	NADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
91	94	PACIFIC OCEAN	CLOUDS, CONV. CELLS	16.5N 169.5W	27.2N 153.3E	70	LO	250	N	N	19910405	235139	246	121	55	7
91	95	PACIFIC OCEAN ISLAND	JOHNSON ATOLL		16.0N 170.0W	10	NV	250	N	N	19910406	000131	244	225	76	7
91	96	NEPAL	HIMALAYA RANGE, CLOUDS		25.9N 86.8E	50	LO	250	N	N	19910406	011437	246	90	16	8
91	97	NEPAL	HIMALAYA RANGE, CLOUDS		26.0N 86.9E	65	LO	250	N	N	19910406	011439	246	90	16	8
91	98	NEPAL	HIMALAYA RANGE, CLOUDS		26.0N 87.0E	75	LO	250	N	N	19910406	011441	246	90	16	8
91	99	NEPAL	HIMALAYA RANGE, CLOUDS		26.1N 87.3E	85	LO	250	N	N	19910406	011445	246	91	16	8
91	100	BHUTAN	HIMALAYA RANGE, DOGEN L.	28.0N 89.5E	26.1N 87.4E	30	LO	250	N	N	19910406	011447	246	91	16	8
91	101	CHINA	HIMALAYA RANGE, DOGEN L.	28.0N 89.0E	26.1N 87.6E	15	LO	250	N	Y	19910406	011449	246	91	16	8
91	102	CHINA	HIMALAYA RA, CHAMLING L.	28.0N 88.5E	26.1N 87.6E	30	LO	250	N	Y	19910406	011450	246	91	16	8
91	103	CHINA	HIMALAYAS, BHRAMAPUTRA R.	27.5N 87.5E	26.2N 88.0E	15	LO	250	N	N	19910406	011455	246	91	17	8
91	104	BURMA	HENG TUAN MTNS, CLOUDS		27.7N 97.8E	30	LO	250	N	N	19910406	011722	246	97	26	8
91	105	CHINA	CHIUNG L, ANNING R, YALONG	28.0N 102.0E	27.8N 98.6E	50	LO	250	N	Y	19910406	011734	246	97	27	8
91	106	CHINA	CHIUNG L, ANNING R, YALONG	27.5N 102.0E	27.9N 99.1E	40	LO	250	N	Y	19910406	011741	246	97	27	8
91	107	CHINA	LINGDING BAY-SE PANORAMA	24.0N 113.0E	28.4N 106.2E	30	LO	250	U	N	19910406	011926	246	102	34	8
91	108	CHINA	SE PANORAMA-COAST, V. DARK		28.4N 106.6E	50	LO	250	U	N	19910406	011932	246	102	34	8
91	109	CHINA	VERY DARK, CLOUDS		28.4N 107.4E	50	LO	250	U	N	19910406	011943	246	103	35	8
91	110	LAOS	WUJIANG SHAN, CLOUDS	22.0N 102.0E	28.5N 113.3E	40	LO	250	N	N	19910406	012109	246	107	40	8
91	111	ALGERIA	PIVOT IRRIG, DESERT		28.2N 1.0E	0	LO	250	N	N	19910406	091003	246	110	44	13
91	112	ALGERIA	TADEMAIT PLAT, ILLIA WAD	27.8N 1.8E	28.1N 1.9E	0	NV	250	N	N	19910406	091016	246	111	45	13
91	113	ALGERIA	DESERT, WHITE SPOTS		27.9N 4.0E	0	LO	250	N	N	19910406	091048	246	112	47	13
91	114	ALGERIA	DESERT, ROCK OUTCROP		27.8N 5.2E	0	LO	250	N	N	19910406	091105	246	113	48	13
91	115	ALGERIA	DJEBEL IRRAREN, SAND DUNE	26.5N 5.5E	27.8N 5.7E	0	LO	250	N	N	19910406	091113	246	114	48	13
91	116	ALGERIA	TASSILI NAJJER	26.0N 8.0E	27.4N 9.0E	0	LO	250	N	N	19910406	091201	246	117	51	13
91	117	LIBYA	MESACH MELLET, YELLOW SPT	26.0N 12.5E	26.8N 12.2E	0	LO	250	N	N	19910406	091250	246	120	54	13
91	118	LIBYA	PIVOT IRRIG, MARZUQ SS	26.0N 13.5E	26.6N 13.6E	0	LO	250	N	N	19910406	091311	246	121	56	13
91	119	LIBYA	AGR. IRRIG, UBARI SS.	27.5N 14.5E	26.5N 14.2E	0	LO	250	N	Y	19910406	091319	246	121	56	13
91	120	LIBYA	AGR. IRRIG, UBARI SS.	27.6N 14.7E	26.3N 15.5E	0	LO	250	N	Y	19910406	091339	246	123	57	13
91	121	LIBYA	DOREL-GUSSA HILLS, DIKE	25.5N 16.8E	25.9N 17.5E	0	LO	250	N	N	19910406	091409	246	125	59	13
91	122	LIBYA	SAND DUNES			0	LO	250	N	N						
92	1	BRAZIL	TREWARTHA HUMP AREA	5.0S 35.0W	6.7S 31.5W	50	LO	250	N	N	19910406	172210	243	284	39	18
92	2	BRAZIL	TREWARTHA HUMP AREA	5.5S 35.4W	7.1S 30.8W	50	LO	250	N	N	19910406	172223	243	284	39	18
92	3	MEXICO	S.COAST, BAHIA DULCE AREA	16.7N 99.0W	17.1N 99.0W	40	LO	250	N	N	19910406	184202	245	184	79	19
92	4	COSTA RICA	GOLFO DE NICOYA	10.0N 85.4W	10.6N 85.6W	40	LO	250	N	N	19910406	184602	244	255	74	19
92	5	COSTA RICA	RIO TEMPISQUE AREA	10.3N 85.6W	10.5N 85.5W	40	LO	250	N	N	19910406	184605	244	256	74	19
92	6	COSTA RICA	WATER DETAIL, GULF PAPAGA	10.9N 85.7W	10.4N 85.3W	40	LO	250	N	N	19910406	184608	244	256	74	19
92	7	NICARAGUA	W.COAST, LAKE NICARAGUA	11.3N 85.7W	10.2N 84.8W	50	LO	250	N	N	19910406	184617	244	258	73	19
92	8	NICARAGUA	MANAGUA AREA	12.2N 86.4W	10.0N 84.5W	80	LO	250	N	N	19910406	184623	244	259	73	19
92	9	COLOMBIA	RIO ATRATO AREA	7.5N 77.0W	6.7N 78.5W	80	LO	250	N	N	19910406	184815	244	270	67	19
92	10	COLOMBIA	RIO ATRATO AREA		6.6N 78.3W	90	LO	250	N	N	19910406	184819	244	271	66	19
92	11	COLOMBIA	RIO ATRATO AREA	7.5N 77.0W	6.0N 77.3W	90	LO	250	N	N	19910406	184837	243	272	65	19

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
92	12	COLOMBIA	RIO ATRATO AREA	6.3N 77.5W	5.9N 77.1W	95	LO	250	N	N	19910406	184841	243	272	65	19
92	13	COLOMBIA	BAHIA DE CUPICA AREA	5.3N 76.9W	5.8N 76.9W	95	LO	250	N	N	19910406	184845	243	272	65	19
92	14	COLOMBIA	BAHIA SOLANO	5.7N 74.7W	5.3N 76.0W	60	LO	250	N	N	19910406	184902	243	273	64	19
92	15	COLOMBIA	MAGDALENA RIVER VALLEY	2.5S 66.5W	4.9N 75.4W	50	LO	250	N	N	19910406	184914	243	274	63	19
92	16	BRAZIL	AMAZON RIVER	2.5S 65.5W	0.1N 67.1W	70	LO	250	N	N	19910406	185152	243	280	54	19
92	17	BRAZIL	AMAZON RIVER	2.5S 65.5W	0.0N 67.0W	70	LO	250	N	N	19910406	185155	243	281	54	19
92	18	BRAZIL	AMAZON RIVER	3.2S 64.5W	0.1S 66.8W	60	LO	250	N	N	19910406	185159	243	281	53	19
92	19	BRAZIL	PARA PROV. FORESTRY, AGRI.	7.5S 53.9W	7.5S 53.9W	80	LO	250	N	N	19910406	185604	243	284	38	19
92	20	BRAZIL	PARA PROV. VRY CLOUDY	7.9S 53.3W	7.9S 53.3W	95	LO	250	N	N	19910406	185616	243	284	37	19
92	21	BRAZIL	PARA PROV. VRY CLOUDY	8.8S 51.5W	8.8S 51.5W	90	LO	250	N	N	19910406	185649	243	284	35	19
92	22	GALAPAGOS ISLANDS	FERNANDINA	0.5S 91.5W	1.3N 93.0W	60	LO	250	N	N	19910406	202440	243	280	57	20
92	23	GALAPAGOS ISLANDS	SAN SALVADOR, SANTA CRUZ	0.4S 90.5W	1.1N 92.6W	60	LO	250	N	N	19910406	202447	243	280	56	20
92	24	GALAPAGOS ISLANDS	PINTA, MARCHENA	0.5N 90.5W	0.9N 92.3W	30	LO	250	N	N	19910406	202453	243	280	56	20
92	25	PERU	RIO MARDE DE DIOS	12.5S 70.0W	11.3S 70.8W	80	LO	250	N	N	19910406	203139	243	284	31	20
92	26	PERU	RIO MARDE DE DIOS	12.5S 70.0W	11.6S 70.2W	90	LO	250	N	N	19910406	203151	243	284	30	20
92	27	PERU	RIO MARDE DE DIOS	12.5S 70.0W	11.9S 69.5W	90	LO	250	N	N	19910406	203203	243	284	29	20
92	28	BOLIVIA	RIO MADRE DE DIOS AREA	11.0S 66.0W	12.6S 68.3W	80	LO	250	N	N	19910406	203226	243	284	28	20
92	29	BOLIVIA	RIO MADRE DE DIOS AREA	11.0S 66.0W	13.0S 67.5W	80	LO	250	N	N	19910406	203240	243	284	27	20
92	30	BOLIVIA	CLDS, JUNGLE, RIVER	14.0S 65.4W	14.0S 65.4W	80	LO	250	N	N	19910406	203318	243	284	24	20
92	31	BOLIVIA	CLDS, JUNGLE, RIVER	14.1S 65.1W	14.1S 65.1W	90	LO	250	N	N	19910406	203323	243	284	24	20
92	32	BOLIVIA	CLDS, JUNGLE, RIVER	14.3S 64.8W	14.3S 64.8W	80	LO	250	N	N	19910406	203328	243	284	24	20
92	33	BOLIVIA	CLDS, JUNGLE, RIVER	14.5S 64.3W	14.5S 64.3W	90	LO	250	N	N	19910406	203337	243	283	23	20
92	34	BOLIVIA	CLDS, JUNGLE, RIVER	14.7S 63.9W	14.7S 63.9W	95	LO	250	N	N	19910406	203344	243	283	23	20
92	35	PACIFIC OCEAN ISLAND	FRENCH FRIGATE SHOALS	23.8N 166.1W	23.8N 165.1W	30	LO	250	N	N	19910406	214350	246	129	64	21
92	36	USA-HI	NIHAU ISLAND	21.9N 160.1W	22.5N 160.8W	20	LO	250	N	N	19910406	21458	245	135	68	21
92	37	USA-HI	KAPAA ISLAND	22.0N 159.5W	22.4N 160.5W	50	LO	250	N	N	19910406	214503	245	135	68	21
92	38	USA-HI	OAHU ISLAND	21.5N 158.0W	22.0N 159.3W	40	LO	250	N	N	19910406	214523	245	137	69	21
92	39	USA-HI	MOLOKAI, MAUI, LANAI	21.1N 156.9W	21.6N 158.1W	40	LO	250	N	N	19910406	214542	245	139	70	21
92	40	USA-HI	MAUI	20.8N 156.3W	21.3N 157.4W	70	LO	250	N	N	19910406	214554	245	141	71	21
92	41	USA-HI	HAWAII	19.6N 155.7W	21.1N 156.9W	70	LO	250	N	N	19910406	214603	245	142	71	21
92	42	USA-HI	HAWAII	19.4N 155.7W	20.9N 156.3W	60	LO	250	N	N	19910406	214612	245	143	72	21
92	43	KUWAIT	OIL WELL SMOKE PLUMES	29.0N 48.0E	25.5N 45.1E	0	LO	250	N	N	19910407	070244	246	118	55	27
92	44	KUWAIT	OIL WELL SMOKE PLUMES	29.0N 48.0E	25.4N 45.4E	0	LO	250	N	N	19910407	070248	246	118	56	27
92	45	SAUDI ARABIA	OIL WELL SMOKE PLUMES	28.0N 48.0E	25.3N 45.7E	0	LO	250	N	N	19910407	070253	246	118	56	27
92	46	SAUDI ARABIA	AL JUBAYL AREA	27.0N 49.0E	24.6N 48.5E	0	LO	250	N	N	19910407	070337	246	121	59	27
92	47	KUWAIT	OIL WELL SMOKE PLUMES	28.8N 47.5E	24.4N 49.2E	0	LO	250	N	N	19910407	070348	246	121	59	27
92	48	SAUDI ARABIA	OIL WELL SMOKE PLUMES	28.0N 47.5E	24.3N 49.8E	0	LO	250	N	N	19910407	070357	246	122	60	27
92	49	UNITED ARAB EMIRATES	COAST, OFFSHORE IS.	24.3N 52.2E	23.7N 51.9E	40	LO	250	N	N	19910407	070430	246	124	62	27
92	50	INDONESIA	W.END SUMATRA, S.COAST	4.0N 96.5E	4.4N 94.4E	70	LO	250	N	N	19910407	071659	244	276	66	27
92	51	INDONESIA	W.END SUMATRA, S.COAST	4.4N 96.0E	4.4N 94.6E	60	LO	250	N	N	19910407	071702	244	276	66	27

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	NADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
92	52	INDONESIA	W.END SUMATRA,S.COAST	4.6N 95.8E	4.3N 94.8E	60	LO	250	N	N	19910407	071705	244	276	68	27
92	53	INDONESIA	W.END SUMATRA,N.COAST	5.0N 95.7E	4.0N 95.2E	80	LO	250	N	N	19910407	071714	244	277	65	27
92	54	INDONESIA	SUMATRA,LAKE DANAU TOBA	2.8N 98.7E	3.6N 95.9E	90	LO	250	N	N	19910407	071726	244	278	65	27
92	55	INDONESIA	SUMATRA,PASAR SINGKIL	2.5N 98.0E	3.5N 96.0E	70	LO	250	N	N	19910407	071729	244	278	65	27
92	56	INDONESIA	ISLAND OF PULAU NIAS	1.0N 97.6E	3.4N 96.2E	30	LO	250	N	N	19910407	071733	244	278	64	27
92	57	INDONESIA	KUMANTAN RIVER,DELTA AREA	0.6S 102.5E	0.4S 102.8E	80	LO	250	N	N	19910407	071938	243	283	57	27
92	58	INDONESIA	KUANTAN RIVER,DELTA AREA	0.4S 103.1E	0.7S 103.2E	90	LO	250	N	N	19910407	071947	243	283	56	27
92	59	INDONESIA	HARI RIVER,DELTA AREA	1.1S 103.7E	0.9S 103.6E	70	LO	250	N	N	19910407	071955	243	283	55	27
92	60	INDONESIA	HARI RIVER,DELTA AREA	1.5S 104.0E	1.2S 104.1E	60	LO	250	N	N	19910407	072003	243	283	55	27
92	61	INDONESIA	AIR TJALAK RIVER AREA	2.0S 104.6E	1.4S 104.4E	60	LO	250	N	N	19910407	072010	243	283	55	27
92	62	INDONESIA	PALEMBANG AREA	3.0S 104.5E	2.2S 105.8E	80	LO	250	N	N	19910407	072037	243	284	53	27
92	63	INDONESIA	H2O DETAIL,SELAT BANGKA	2.5S 105.7E	2.4S 106.3E	30	LO	250	N	N	19910407	072045	243	284	53	27
92	64	INDONESIA	PULAU BANGKA,S.TIP	3.1S 106.7E	3.1S 107.4E	60	LO	250	N	N	19910407	072107	243	284	51	27
92	65	AUSTRALIA-NT	LAKE WOODS AREA	17.8S 133.5E	16.8S 133.5E	50	LO	250	N	N	19910407	072908	243	284	21	27
92	66	AUSTRALIA-NT	LAKE WOODS AREA	17.4S 133.5E	17.0S 133.9E	50	LO	250	N	N	19910407	072915	243	284	20	27
92	67	AUSTRALIA-NT	LAKE WOODS AREA	18.2S 133.7E	17.1S 134.2E	60	LO	250	N	N	19910407	072920	243	284	20	27
92	68	AUSTRALIA-NT	SE.LAKE WOODS AREA	18.5S 134.5E	17.5S 135.0E	70	LO	250	N	N	19910407	072934	243	284	19	27
92	69	AUSTRALIA-Q	BARKLY TABLELAND		18.8S 138.2E	5	LO	250	N	N	19910407	073028	243	283	16	27
92	70	AUSTRALIA-Q	BARKLY TABLELAND		19.1S 139.1E	10	LO	250	N	N	19910407	073043	243	282	15	27
92	71	AUSTRALIA-Q	W.CENTRAL		19.5S 139.9E	30	LO	250	N	N	19910407	073057	243	282	14	27
92	72	AUSTRALIA-Q	W.CENTRAL		19.7S 140.4E	70	LO	250	N	N	19910407	073106	243	282	13	27
92	73	AUSTRALIA-Q	CENTRAL		20.0S 141.3E	20	LO	250	N	N	19910407	073121	243	282	12	27
92	74	AUSTRALIA-Q	CENTRAL		20.3S 142.1E	10	LO	250	N	N	19910407	073134	243	281	12	27
92	75	AUSTRALIA-Q	CENTRAL,DARK IMAGE		20.8S 143.4E	10	LO	250	N	N	19910407	073155	243	281	10	27
92	76	AUSTRALIA-Q	CENTRAL,DARK IMAGE		21.1S 144.3E	40	LO	250	N	N	19910407	073211	243	281	9	27
92	77	ALGERIA	GRAND ERG ORIENTAL		28.1N 4.6E	0	LO	250	N	N	19910407	083201	247	105	39	28
92	78	ALGERIA	TINRHERT PLATEAU		27.9N 6.4E	0	LO	250	N	N	19910407	083227	247	107	41	28
92	79	LIBYA	UBARI SAND SEA,ADRI AREA	27.0N 13.4E	26.9N 13.6E	0	NV	250	N	N	19910407	083414	246	111	48	28
92	80	LIBYA	UBARI SAND SEA,ADRI AREA	27.5N 13.0E	26.8N 14.3E	0	LO	250	N	N	19910407	083425	246	112	49	28
92	81	LIBYA	UBARI SAND SEA,ADRI AREA	27.5N 14.0E	26.7N 15.1E	0	LO	250	N	N	19910407	083436	246	112	49	28
92	82	LIBYA	SABHAH AREA,AZ ZALLAF	26.9N 14.5E	26.6N 15.4E	0	LO	250	L	N	19910407	083441	246	113	50	28
92	83	LIBYA	RAMIA EL-MARZUCHIA AREA	26.0N 15.0E	26.5N 16.4E	0	LO	250	N	N	19910407	083456	246	113	50	28
92	84	LIBYA	EL HARUJ EL ASWAD	17.5N 18.0E	25.9N 19.1E	0	LO	250	N	N	19910407	083537	246	115	53	28
92	85	LIBYA	REBIANA SAND SEA		25.5N 21.1E	0	LO	250	N	N	19910407	083608	246	117	55	28
92	86	SAUDI ARABIA	MAJMAN AREA,CULT.IRRIGAT	17.5N 44.2E	18.0N 44.2E	0	LO	250	N	N	19910407	084223	245	152	77	28
92	87	SAUDI ARABIA	MAJMAN AREA,CULT.IRRIGAT	17.3N 44.7E	17.6N 45.0E	0	LO	250	N	N	19910407	084238	245	155	78	28
92	88	YEMEN (ADEN)	DISSECTED PLATEAU	16.0N 48.5E	16.3N 48.0E	0	LO	250	N	N	19910407	084330	245	170	80	28
92	89	YEMEN (ADEN)	COASTAL AREA	15.2N 51.5E	15.5N 49.7E	0	LO	250	N	N	19910407	084359	245	180	81	28
92	90	MAURITANIA	RICHAT STRUCTURE	21.0N 11.4W	21.3N 12.1W	0	LO	250	N	N	19910407	114651	246	130	68	30
92	91	GULF OF MEXICO	CLDY,SOME LAND		28.1N 88.0W	95	LO	250	N	N	19910407	130713	246	92	19	31

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR	
92	92	GULF OF MEXICO	CLDY, SOME LAND		28.1N	87.1W	95	LO	250	N	19910407	130725	246	93	20	31	
92	93	GULF OF MEXICO	CLDY, SHIP WAKE		28.3N	85.1W	70	LO	250	N	19910407	130755	246	94	21	31	
92	94	GULF OF MEXICO	CLDY, CLOUD WAVES		28.3N	83.7W	99	LO	250	N	19910407	130815	246	94	23	31	
92	95	USA-FL	VRY CLDY		28.4N	82.8W	90	LO	250	N	19910407	130829	246	95	24	31	
92	96	USA-FL	UNDEREXP., CAPE KENNEDY	28.5N	80.5W	80.6W	10	LO	250	N	19910407	130900	246	96	26	31	
92	97	USA-FL	CAPE KENNEDY	28.5N	80.5W	78.4W	30	LO	250	N	19910407	130933	246	97	28	31	
92	98	USA-FL	N.OF CAPE KENNEDY	28.7N	80.8W	78.2W	50	LO	250	N	19910407	130936	246	98	28	31	
92	99	USA-FL	S.FL, EVERGLADES AREA	24.8N	81.0W	76.2W	30	LO	250	N	19910407	131004	246	99	30	31	
92	100	USA-FL	S.FL, EVERGLADES AREA	26.0N	80.6W	76.0W	30	LO	250	N	19910407	131007	246	99	30	31	
92	101	BAHAMAS	GRAND BAHAMA	26.5N	79.0W	75.5W	60	LO	250	N	19910407	131015	246	99	30	31	
92	102	BAHAMAS	GRAND BAHAMA	26.6N	78.2W	75.2W	60	LO	250	N	19910407	131019	246	99	31	31	
92	103	BAHAMAS	GREAT ABACO	26.5N	77.4W	74.9W	70	LO	250	N	19910407	131024	246	99	31	31	
92	104	BAHAMAS	ANDROS ISLAND	24.8N	78.0W	74.1W	60	LO	250	N	19910407	131035	246	100	32	31	
92	105	USA-FL	S.FL	26.2N	80.7W	72.4W	60	LO	250	N	19910407	131100	246	101	33	31	
92	106	ATMOSPHERIC LIMB	VRY DARK, UNDEREXPOSED		25.4S	39.8E	30	HO	250	N	19910407	152317	243	276	-3	32	
92	107	MEXICO	SMOKE PLUMES, DARK FRAME		15.4N	93.3W	70	LO	250	N	19910407	180438	245	162	81	34	
92	108	BRAZIL	NEAR MANAUS, AMAZON FLOOD		2.7S	60.4W	80	LO	250	N	19910407	181455	243	286	55	34	
92	109	BRAZIL	AMAZON R., NEAR MANAUS		3.0S	59.9W	99	LO	250	N	19910407	181504	243	286	55	34	
92	110	BOLIVIA	N.CENTRAL, RIVERS & LAKES		12.8S	66.0W	40	LO	250	N	19910407	195403	244	287	34	35	
92	111	BOLIVIA	N.CENTRAL, RIVERS & LAKES		13.0S	65.4W	50	LO	250	N	19910407	195413	244	287	34	35	
92	112	BOLIVIA	N.CENTRAL, RIVERS & LAKES		13.2S	65.2W	40	LO	250	N	19910407	195417	244	287	33	35	
92	113	BOLIVIA	N.CENTRAL, RIVERS & LAKES		13.3S	64.9W	60	LO	250	N	19910407	195422	244	287	33	35	
92	114	BOLIVIA	N.CENTRAL, RIVERS & LAKES		13.5S	64.6W	70	LO	250	N	19910407	195428	244	287	33	35	
92	115	BOLIVIA	N.CENTRAL, RIVERS & LAKES		13.8S	63.9W	80	LO	250	N	19910407	195441	244	287	32	35	
92	116	BOLIVIA	BORDER BRAZIL, DEFOREST.		15.4S	60.5W	70	LO	250	N	19910407	195541	244	286	28	35	
92	117	BOLIVIA	BORDER BRAZIL, LAKES		15.6S	60.0W	60	LO	250	N	19910407	195549	244	286	27	35	
92	118	CHINA	NE.MT. EVEREST	28.4N	87.2E	28.5N	87.8E	0	NV	250	N	19910408	013622	247	94	22	39
92	119	CHINA	NE.MT. EVEREST		28.5N	88.9E	20	LO	250	N	19910408	013638	248	94	23	39	
92	120	ZAIRE	NE ZAIRE NEAR LK ALBERT		1.9N	29.1E	70	LO	250	N	19910408	112026	245	286	70	45	
92	121	ZAIRE	NE ZAIRE NEAR LK ALBERT		1.8N	29.3E	80	LO	250	N	19910408	112029	245	286	70	45	
92	122	ZAIRE	NE ZAIRE NEAR LK ALBERT		1.7N	29.4E	90	LO	250	N	19910408	112031	245	286	70	45	
92	123	ZAIRE	LAKE ALBERT AREA	1.9N	31.2E	29.7E	70	LO	250	N	19910408	112037	245	286	69	45	
93	1	PERU	CABALLAS, ST. NICHOLS B.	15.0S	75.5W	12.0S	71.4W	25	LO	250	N	19910405	211030	243	281	22	5
93	2	PERU	ACARI, YAUCA CANYONS	15.5S	74.5W	12.1S	71.2W	30	LO	250	N	19910405	211033	243	281	22	5
93	3	PERU	CHAPARRA CANYON	16.0S	74.0W	12.2S	71.0W	20	LO	250	N	19910405	211036	243	281	22	5
93	4	PERU	OCOMA, COTAHUASI CANYONS	15.5S	73.0W	12.2S	70.9W	10	LO	250	N	19910405	211039	243	281	21	5
93	5	PERU	COROPUNA VOL., CAMANA	16.0S	72.5W	12.3S	70.7W	15	LO	250	N	19910405	211042	243	281	21	5
93	6	PERU	AMPATO, CHACHANI VOLCANO	16.0S	72.0W	12.4S	70.5W	15	LO	250	N	19910405	211045	243	281	21	5
93	7	PERU	EL MISTI VOL., SALT LAKE	16.0S	71.5W	12.5S	70.3W	30	LO	250	N	19910405	211049	243	281	21	5
93	8	PERU	AMPATO VOL., MOLES CAN.	15.5S	72.0W	12.6S	70.1W	40	LO	250	N	19910405	211053	243	281	20	5

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
93	9	PERU	SOLIMANA, COROPUNA MTS.	15.5S 73.0W	12.7S 69.9W	40	LO	250	N	Y	19910405	211056	243	281	20	5
93	10	PERU	LAKE TITICACA	15.5S 69.5W	13.0S 69.3W	65	LO	250	N	Y	19910405	211107	243	281	20	5
93	11	BOLIVIA	EASTERN FOOTHILLS, ANDES		13.9S 67.4W	55	LO	250	N	Y	19910405	211141	243	281	17	5
93	12	BOLIVIA	EASTERN FOOTHILLS, ANDES		14.0S 67.3W	55	LO	250	N	Y	19910405	211143	243	281	17	5
93	13	BOLIVIA	EASTERN FOOTHILLS, ANDES		14.1S 67.2W	60	LO	250	N	Y	19910405	211146	243	281	17	5
93	14	BOLIVIA	EASTERN FOOTHILLS, ANDES		14.2S 67.0W	60	LO	250	N	Y	19910405	211149	243	281	17	5
93	15	BOLIVIA	EASTERN FOOTHILLS, ANDES		14.2S 66.8W	40	LO	250	N	Y	19910405	211152	243	281	17	5
93	16	BOLIVIA	EASTERN ANDES		15.2S 64.8W	50	LO	250	N	Y	19910405	211229	243	280	14	5
93	17	BOLIVIA	ICHOA RIVER	17.0S 65.5W	15.5S 64.1W	65	LO	250	N	Y	19910405	211241	243	280	14	5
93	18	ARGENTINA	PILCAMAYO RIVER	22.0S 61.0W	16.7S 61.6W	30	LO	250	N	Y	19910405	211325	243	280	11	5
93	19	ARGENTINA	CENTRAL ANDES HIGHLANDS		17.4S 59.8W	40	HO	250	N	Y	19910405	211355	243	279	9	5
93	20	BOLIVIA	THUNDERSTORM, PANTANAL		18.1S 58.2W	60	NV	250	N	Y	19910405	211424	243	279	7	5
93	21	BOLIVIA	THUNDERSTORM, PANTANAL		18.4S 57.6W	85	NV	250	N	Y	19910405	211433	243	278	7	5
93	22	PACIFIC OCEAN	FRONTS, UPWELLING		25.0N 164.5E	10	LO	250	N	Y	19910405	235430	246	135	64	7
93	23	PACIFIC OCEAN	COLLAPSE T/S		24.5N 166.6E	30	LO	250	N	Y	19910405	235503	246	138	66	7
93	24	PACIFIC OCEAN	JOHNSTON ISLAND	16.5N 169.5W	16.8N 171.7W	10	LO	250	N	Y	19910406	000101	244	216	76	7
93	25	ARABIAN SEA	CLOUDS OFF C. OF INDIA		20.8N 68.9E	80	LO	250	N	Y	19910406	010952	245	82	-1	8
93	26	INDIA	CLOUDS, VERY DARK		21.2N 69.8E	75	LO	250	N	Y	19910406	011008	245	83	-0	8
93	27	INDIA	CLOUDS, VERY DARK		21.4N 70.4E	75	LO	250	N	Y	19910406	011018	245	83	-0	8
93	28	CHINA	HIMALAYAS, TIBET PL.	28.5N 85.5E	25.1N 83.1E	45	LO	250	N	Y	19910406	011340	246	88	12	8
93	29	CHINA	HIMALAYAS, TIBET PL.	28.5N 85.5E	25.2N 83.5E	40	LO	250	N	Y	19910406	011347	246	89	12	8
93	30	CHINA	HIMALAYAS, TIBET PL.	28.5N 86.0E	25.4N 84.1E	45	LO	250	N	Y	19910406	011356	246	89	13	8
93	31	CHINA	HIMALAYAS, TIBET PL.	28.5N 86.5E	25.5N 84.7E	35	LO	250	N	Y	19910406	011405	246	89	13	8
93	32	CHINA	HIMALAYAS, TIBET PL.	28.5N 90.5E	26.5N 89.8E	10	LO	250	N	Y	19910406	011523	246	92	18	8
93	33	CHINA	HIMALAYAS, TIBET PL.	28.5N 91.5E	26.8N 90.0E	25	LO	250	N	Y	19910406	011526	246	92	18	8
93	34	CHINA	TIBET PL., SILING LK.	31.0N 90.0E	26.8N 91.5E	0	HO	250	N	Y	19910406	011548	246	93	20	8
93	35	CHINA	TIBET PL., NAM LK.	31.0N 90.5E	26.9N 91.7E	0	HO	250	N	Y	19910406	011551	246	93	20	8
93	36	CHINA	TIBET PLATEAU	31.5N 92.0E	26.9N 91.9E	0	HO	250	N	Y	19910406	011554	246	93	20	8
93	37	CHINA	FOLDED R., CHENG HAI LAKE	27.0N 101.0E	27.2N 93.7E	65	HO	250	N	Y	19910406	011622	246	94	22	8
93	38	CHINA	YA-LUNG R., FOLDED MNTS.	27.5N 101.5E	27.4N 95.0E	60	LO	250	N	Y	19910406	011641	246	95	23	8
93	39	CHINA	FOLDED RANGES	27.5N 100.5E	27.4N 95.4E	30	LO	250	N	Y	19910406	011646	246	95	23	8
93	40	CHINA	FOLDED RANGES, YALANG R.	28.0N 101.0E	27.5N 96.2E	15	LO	250	N	Y	19910406	011659	246	96	24	8
93	41	CHINA	FOLDED RANGES	27.0N 101.5E	27.8N 98.5E	45	LO	250	N	Y	19910406	011733	246	97	26	8
93	42	CHINA	FOLDED R., YANGTZE RIVER	28.0N 99.5E	27.8N 98.7E	60	LO	250	N	Y	19910406	011735	246	97	27	8
93	43	CHINA	FOLDED R., MEKONG RIVER	27.0N 99.0E	27.8N 98.9E	65	LO	250	N	Y	19910406	011738	246	97	27	8
93	44	CHINA	FOLDED RANGES		27.9N 99.2E	75	LO	250	N	Y	19910406	011743	246	97	27	8
93	45	CHINA	FOLDED RANGES	28.0N 101.5E	27.9N 99.4E	45	LO	250	N	Y	19910406	011746	246	97	27	8
93	46	CHINA	FOLDED RANGES	28.5N 102.0E	27.9N 99.7E	50	LO	250	N	Y	19910406	011750	246	98	27	8
93	47	CHINA	FOLDED RANGES		28.0N 100.3E	70	LO	250	N	Y	19910406	011759	246	98	28	8
93	48	MOROCCO	ANTI-ATLAS, OUARKIZ MTN	28.5N 10.0W	28.5N 8.4W	10	NV	250	N	Y	19910406	090746	247	103	36	13



TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	NAOIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR	
93	49	MOROCCO	ANTI-ATLAS, QUARKZIZ MTN	29.0N	9.0W 28.5N	7.9W	0	NV	250	N	Y	19910406	090754	247	104	36	13
93	50	MOROCCO	ANTI-ATLAS, QUARKZIZ MTS	29.5N	8.5W 28.5N	7.7W	0	NV	250	N	Y	19910406	090756	247	104	36	13
93	51	MOROCCO	ANTI-ATLAS MTNS.	30.0N	9.0W 28.5N	6.7W	10	LO	250	N	N	19910406	090811	247	104	37	13
93	52	MOROCCO	ANTI-ATLAS MTNS.	30.0N	8.5W 28.5N	6.5W	10	LO	250	N	Y	19910406	090814	247	105	37	13
93	53	MOROCCO	ANTI-ATLAS MTNS., SOUS R	30.5N	8.5W 28.5N	6.4W	0	LO	250	N	Y	19910406	090816	247	105	37	13
93	54	MOROCCO	ANTI-ATLAS MTNS.	30.0N	8.0W 28.5N	6.2W	0	LO	250	N	Y	19910406	090818	247	105	38	13
93	55	MOROCCO	ANTI-ATLAS MTNS.	29.0N	8.0W 28.5N	6.0W	0	NV	250	N	Y	19910406	090821	247	105	38	13
93	56	ALGERIA	ANTI-ATLAS MTNS.	28.5N	8.0W 28.5N	5.8W	0	NV	250	N	Y	19910406	090824	247	105	38	13
93	57	MOROCCO	HIGH ATLAS MTNS.	31.0N	8.0W 28.5N	4.6W	5	LO	250	N	N	19910406	090841	247	106	39	13
93	58	MOROCCO	HIGH ATLAS MTNS.	31.5N	7.5W 28.5N	4.5W	5	LO	250	N	Y	19910406	090843	247	106	39	13
93	59	MOROCCO	HIGH ATLAS MTNS.	31.5N	6.0W 28.5N	4.3W	5	LO	250	N	Y	19910406	090846	247	106	39	13
93	60	MOROCCO	HIGH ATLAS MTNS.	31.0N	6.5W 28.5N	4.0W	5	LO	250	N	Y	19910406	090851	247	106	40	13
93	61	MOROCCO	HIGH ATLAS MTNS.	31.0N	5.0W 28.4N	3.7W	0	LO	250	N	Y	19910406	090855	247	107	40	13
93	62	ALGERIA	RHERIS RIVER	30.5N	4.5W 28.4N	3.5W	0	LO	250	N	Y	19910406	090858	247	107	40	13
93	63	ALGERIA	ANTI-ATLAS MTNS.	30.0N	5.0W 28.4N	3.3W	0	LO	250	N	Y	19910406	090901	247	107	40	13
93	64	MOROCCO	PLANTATIONS NEAR ZAGORA	30.5N	6.0W 28.4N	3.1W	0	LO	250	N	Y	19910406	090904	247	107	40	13
93	65	ALGERIA	ANTI-ATLAS MTNS.	29.5N	6.0W 28.4N	2.9W	0	LO	250	N	Y	19910406	090907	247	107	41	13
93	66	ALGERIA	TOUNASSINE ROCK DESERT	28.5N	4.5W 28.4N	2.3W	0	LO	250	N	N	19910406	090915	247	108	41	13
93	67	ALGERIA	TOUNASSINE ROCK DESERT	27.5N	4.0W 28.4N	1.7W	0	LO	250	N	N	19910406	090924	247	108	42	13
93	68	ALGERIA	LINEAR SAND DUNES	27.5N	3.5W 28.4N	1.5W	0	NV	250	N	Y	19910406	090927	247	108	42	13
93	69	ALGERIA	LINEAR SAND DUNES	28.0N	3.5W 28.3N	1.4W	0	NV	250	N	Y	19910406	090928	247	108	42	13
93	70	ALGERIA	LINEAR SAND DUNES	28.0N	3.0W 28.3N	1.2W	0	NV	250	N	Y	19910406	090931	247	108	42	13
93	71	ALGERIA	BEN TADJINE HTLLS	28.5N	3.5W 28.3N	1.1W	0	LO	250	N	Y	19910406	090933	246	108	42	13
93	72	ALGERIA	KAHAL TABLELAND, DUNES	28.5N	2.5W 28.3N	0.9W	0	LO	250	N	Y	19910406	090936	246	109	42	13
93	73	ALGERIA	KAHAL TABLELAND, DUNES	28.5N	2.0W 28.3N	0.7W	0	LO	250	N	Y	19910406	090939	246	109	43	13
93	74	ALGERIA	KAHAL TABLELAND, DUNES	28.0N	1.5W 28.3N	0.5W	0	LO	250	N	Y	19910406	090942	246	109	43	13
93	75	ALGERIA	KAHAL TABLELAND, DUNES	29.0N	2.5W 28.3N	0.3W	0	LO	250	N	Y	19910406	090945	246	109	43	13
93	76	ALGERIA	KAHAL TABLELAND, DUNES	29.5N	2.0W 28.3N	0.1E	0	LO	250	N	Y	19910406	090950	246	109	43	13
93	77	ALGERIA	GRAND ERG OCCIDENTAL	29.5N	1.5W 28.2N	0.3E	0	LO	250	N	Y	19910406	090953	246	109	43	13
93	78	ALGERIA	GRAND ERG OCCIDENTAL	29.5N	1.0W 28.2N	0.5E	0	LO	250	N	Y	19910406	090956	246	110	44	13
93	79	ALGERIA	E. OF ERG CHECH, ADRAR	27.5N	0.0W 28.2N	1.2E	0	LO	250	N	N	19910406	091007	246	110	44	13
93	80	ALGERIA	SOUTHERN TADEMAIT PLAT.	27.0N	1.0E 28.1N	1.8E	0	LO	250	N	Y	19910406	091015	246	111	45	13
93	81	ALGERIA	SOUTHERN TADEMAIT PLAT.	27.5N	1.5E 28.1N	1.9E	0	LO	250	N	Y	19910406	091017	246	111	45	13
93	82	ALGERIA	SOUTHERN TADEMAIT PLAT.	27.5N	1.5E 28.1N	2.2E	0	LO	250	N	Y	19910406	091021	246	111	45	13
93	83	ALGERIA	SOUTHERN TADEMAIT PLAT.	28.0N	1.5E 28.1N	2.4E	0	LO	250	N	Y	19910406	091024	246	111	45	13
93	84	ALGERIA	SOUTHERN TADEMAIT PLAT.	28.0N	2.5E 28.1N	2.6E	0	LO	250	N	Y	19910406	091027	246	111	45	13
93	85	ALGERIA	SOUTHERN TADEMAIT PLAT.	28.0N	3.0E 28.0N	2.9E	0	LO	250	N	Y	19910406	091031	246	111	46	13
93	86	ALGERIA	TADEMAIT PLATEAU	28.5N	3.0E 28.0N	3.0E	0	LO	250	N	Y	19910406	091033	246	112	46	13
93	87	ALGERIA	TADEMAIT PLATEAU	28.5N	2.5E 28.0N	3.4E	0	LO	250	N	Y	19910406	091038	246	112	46	13
93	88	ALGERIA	W. AHAGGAR MTNS.	26.0N	5.0E 27.9N	4.0E	0	LO	250	N	N	19910406	091047	246	112	47	13

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		MADIR		CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM	EL	OR
				LAT	LONG	LAT	LONG												
93	89	ALGERIA	W. AHAGGAR MTNS.	25.5N	4.5E 27.9N	4.2E	0 LO 250 N Y	19910406	091050	246	112	47	13						
93	90	ALGERIA	W. AHAGGAR MTNS.	25.0N	4.0E 27.9N	4.4E	0 LO 250 N Y	19910406	091054	246	113	47	13						
93	91	ALGERIA	TADEMAIT PLATEAU	28.0N	4.0E 27.8N	5.3E	0 LO 250 N Y	19910406	091106	246	113	48	13						
93	92	ALGERIA	TADEMAIT PLATEAU	28.5N	4.5E 27.8N	5.5E	0 LO 250 N Y	19910406	091109	246	114	48	13						
93	93	ALGERIA	TADEMAIT P., ERG ORIENT.	29.0N	4.5E 27.8N	5.7E	0 LO 250 N Y	19910406	091113	246	114	48	13						
93	94	ALGERIA	NW AHAGGAR MTNS.	27.5N	5.0E 27.7N	6.1E	0 LO 250 N Y	19910406	091118	246	114	49	13						
93	95	ALGERIA	NW AHAGGAR MTNS.	28.0N	5.5E 27.7N	6.3E	0 LO 250 N Y	19910406	091121	246	114	49	13						
93	96	ALGERIA	AHAGGAR MTNS., DUNES	26.0N	7.5E 27.6N	6.8E	0 LO 250 N Y	19910406	091129	246	115	49	13						
93	97	ALGERIA	ERG ISSAOUANE	26.5N	7.5E 27.6N	7.0E	0 LO 250 N Y	19910406	091131	246	115	49	13						
93	98	ALGERIA	ERG ISSAOUANE	27.0N	8.0E 27.6N	7.2E	0 LO 250 N Y	19910406	091134	246	115	50	13						
93	99	ALGERIA	OUARENE PLAIN	28.0N	8.5E 27.6N	7.4E	0 LO 250 N Y	19910406	091138	246	115	50	13						
93	100	ALGERIA	ERG ISSAOUANE	28.5N	8.0E 27.5N	7.6E	0 LO 250 N Y	19910406	091141	246	115	50	13						
93	101	ALGERIA	ERG ISSAOUANE	27.5N	8.0E 27.5N	7.9E	0 LO 250 N Y	19910406	091145	246	116	50	13						
93	102	ALGERIA	AHAGGAR MTNS.	25.5N	8.0E 27.4N	8.4E	0 LO 250 N Y	19910406	091153	246	116	51	13						
94	1	BRAZIL	AMAZON R. DELTA PLUME	0.5N	49.5W		40 HO 100 N N												
94	2	BRAZIL	NE BRAZIL COAST	0.5S	47.0W		50 LO 100 N Y												
94	3	BRAZIL	NE BRAZIL COAST	1.0S	46.0W		50 LO 100 N Y												
94	4	BRAZIL	NE BRAZIL C., SAO LUIS	2.0S	44.0W		40 LO 100 N N												
94	5	BRAZIL	NE BRAZIL C., PARNAIBA	2.5S	42.5W		40 LO 100 U Y												
94	6	BRAZIL	NE BRAZIL C., PARNAIBA	2.5S	41.0W		35 LO 100 N Y												
94	7	BRAZIL	NE BRAZIL C., FORTALEZA	3.5S	38.5W		40 LO 100 N N												
94	8	BRAZIL	NE BRAZIL COAST	5.0S	36.5W		30 LO 100 N N												
94	9	BRAZIL	NE BRAZIL C., NATAL	5.0S	35.5W		30 LO 100 N Y												
94	10	BRAZIL	NE BRAZIL C., RECIFE	7.5S	35.0W		35 LO 100 U Y												
94	11	BRAZIL	BRAZIL COAST SHIP WAKES	5.0S	36.5W		35 HO 100 N N												
94	12	PACIFIC OCEAN	CLOUDS OFF BAJA CALIF.				90 LO 100 U N												
94	13	PACIFIC OCEAN	SHIP WAKES IN SUNGLINT	19.0N	106.0W		0 LO 100 U N												
94	14	MEXICO	CAPE CORRIENTES	20.0N	105.5W		0 LO 100 N N												
94	15	MEXICO	COAST, ANGOSTUTURA RES.	14.5N	92.5W		35 LO 100 N Y												
94	16	GUATEMALA	COAST	14.0N	91.0W		55 LO 100 N Y												
94	17	PACIFIC OCEAN	FRONT OFF GUATEMALA C.	13.0N	92.0W		25 LO 100 N N												
94	18	NICARAGUA	L. NICARAGUA, NICCOYA PEN	11.0N	86.0W		30 LO 100 N N												
94	19	PACIFIC OCEAN	INT. WAVES, COSTA RICA C	9.0N	85.0W		50 LO 100 U N												
94	20	BRAZIL	AMAZON, JAPURA RIVERS	3.0S	65.0W		55 LO 100 N N												
94	21	BRAZIL	THUNDERSTORMS AMAZON BAS				75 LO 100 U N												
94	22	BRAZIL	ARAGUAIA RIVER	13.0S	50.5W		40 LO 100 N N												
94	23	BRAZIL	TOCANTINS RIVER BASIN	11.0S	48.5W		45 LO 100 N N												
94	24	BRAZIL	LAND USE E. TOCANTINS R.				50 LO 100 N N												
94	25	BRAZIL	SAO FRANCISCO R. BASIN	13.0S	43.5W		30 LO 100 N N												
94	26	BRAZIL	SAO FRANCISCO R. MOUTH	10.5S	36.5W		65 HO 100 N N												

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL	OR
94	27	BRAZIL	SAO FRANCISCO R. MOUTH	11.0S 38.0W		70	HO	100	U	N						
94	28		GRO PAYLOAD IN BAY			99	O	100	N	N						
94	29		GRO PAYLOAD IN BAY					0	100	N						
94	30		GRO PAYLOAD IN BAY					0	100	N						
94	31		GRO PAYLOAD IN BAY					0	100	N						
94	32	PACIFIC OCEAN	CLOUDS			85	LO	100	U	N						
94	33	PACIFIC OCEAN	CLOUDS			95	LO	100	U	N						
94	34		VIEW OF OVERHEAD WINDOW					0	100	N						
94	35		VIEW OF OVERHEAD WINDOW					0	100	N						
94	36	GALAPAGOS ISLANDS	SUNGLINT, INT. WAVES	0.5S 90.5W		15	LO	100	N	N						
94	37	BOLIVIA	GRANDE R., SANTA CRUZ	17.0S 62.0W		50	HO	100	N	N						
94	38	OCEAN	EDDIES, SUNGLINT			25	HO	100	N	N						
94	39	OCEAN	EDDIES, SUNGLINT			15	HO	100	N	N						
94	40	OCEAN	EDDIES, SUNGLINT			30	HO	100	N	N						
94	41	OCEAN	CLOUDS			80	HO	100	N	N						
94	42	USA-HI	OAHU, MOLOKAI, LANAI	22.0N 157.5W		35	LO	100	N	N						
94	43	USA-HI	HAWAII, MONA LOA, KEA V.	19.5N 155.5W		50	LO	100	N	N						
94	44	USA-HI	OAHU, KAUAI	22.0N 159.5W		35	LO	100	N	N						
94	45	USA-HI	KAUAI, OAHU, MOLOKAI	21.5N 158.0W		25	LO	100	N	N						
94	46	USA-HI	HAWAII, MAUI, LANAI	21.0N 156.5W		45	LO	100	N	N						
94	47	USA-HI	HAWAII, MAUI, MAUNA LOA	20.0N 155.0W		55	LO	100	N	N						
94	48	CHINA	FRONTAL CLOUD, DARK			50	LO	100	U	N						
94	49	CHINA	FRONTAL CLOUD, DARK			75	LO	100	U	N						
94	50	CHINA	HAZE, FOG WUYI MTHS.			30	LO	100	N	N						
94	51	CHINA	HAZE, FOG WUYI MTHS.			50	LO	100	N	N						
94	52	CHINA	HAZE, FOG WUYI MTHS.			55	LO	100	N	N						
94	53	CHINA	COAST, SED. PLUMES			55	LO	100	N	N						
94	54	CHINA	COAST, SED. PLUMES			65	LO	100	U	N						
94	55	SAUDI ARABIA	KUWAIT OIL WELL FIRES	28.0N 48.5E		15	HO	100	N	N						
94	56	SAUDI ARABIA	KUWAIT OIL WELL FIRES	27.0N 48.0E		15	HO	100	N	N						
94	57	OMAN	MADRAKAH PT., SAUQIRAH B	19.0N 56.0E		5	LO	100	N	N						
94	58	OMAN	SAMHAN MTS., QAMAR BAY	18.0N 54.0E		10	HO	100	N	N						
94	59	OMAN	COAST, EMPTY QUARTER	19.0N 51.0E		10	HO	100	N	N						
94	60	OMAN	ALLUVIAL FANS, OMAN MTHS	21.5N 57.5E		10	LO	100	N	N						
94	61	OMAN	EMPTY QUARTER, DUST ST.	22.0N 52.5E		10	HO	100	N	N						
94	62	OMAN	AL MASIRAH IS., ALL. FAN	20.5N 59.0E		5	LO	100	N	N						
94	63	ARABIAN SEA	DYING THUNDERSTORM					HO	100	N						
94	64	INDIAN OCEAN	PALK ST., G. OF MANNAR	9.0N 80.0E		30	HO	100	N	N						
94	65	JAVA SEA	SULOYS, SUMATERA, BANGKA	4.5S 107.5E		55	LO	100	U	N						
94	66	JAVA SEA	SULOYS, SUMATERA, BANGKA	5.0S 108.0E		50	HO	100	U	N						

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		MADIR		CC	IL	FL	E	S	DATE	GMT	AL	AZ	EL	OR
				LAT	LONG	LAT	LONG											
94	87	JAVA SEA	CLOUDS, SUMATERA, BANGKA	5.0S	109.0E			60	HO	100	U	N						
94	88	AUSTRALIA	WEST C., 80-MILE BEACH	19.0S	122.0E			60	HO	100	U	N						
94	89	AUSTRALIA	COAST, 80-MILE BEACH	20.0S	120.0E			55	HO	100	U	N						
94	90	AUSTRALIA	GREAT SANDY DESERT					65	HO	100	U	N						
94	91	EGYPT	GILF KEBIR PLATEAU	26.5N	28.0E			5	LO	100	N	N						
94	92	EGYPT	NILE RIVER VALLEY	26.0N	30.5E			0	LO	100	N	N						
94	93	ISRAEL	SINAI PEN., DEAD SEA RIFT	31.0N	35.5E			0	HO	100	N	N						
94	94	JORDAN	SINAI PEN., DEAD SEA RIFT	31.0N	36.0E			0	HO	100	N	N						
94	95	JORDAN	SINAI PEN., DEAD SEA RIFT	31.0N	37.0E			0	HO	100	N	N						
94	96	SAUDI ARABIA	G. OF AQABA, MAFUD DES.	30.0N	39.0E			0	HO	100	N	N						
94	77	EGYPT	NUBIAN DES., RED SEA	22.0N	35.5E			15	LO	100	N	N						
94	78	SUDAN	NUBIAN DES., RED SEA	20.5N	35.5E			10	LO	100	N	N						
94	79	SUDAN	NUBIAN DES., NILE RIVER	19.0N	34.0E			15	LO	100	N	N						
94	80	SUDAN	NUBIAN DES., RED SEA	21.0N	35.5E			10	LO	100	N	N						
94	81	RED SEA	OBLIQUE LOOKING N. SINAI	24.5N	36.0E			10	HO	100	N	N						
94	82	RED SEA	OBLIQUE LOOKING N. SINAI	24.0N	37.0E			15	HO	100	N	N						
94	83	AUSTRALIA	L. DISAPPOINTMENT	23.0S	123.0E			5	LO	100	N	N						
94	84	AUSTRALIA	GREAT SANDY/GIBSON DES.	22.0S	124.0E			20	LO	100	N	N						
94	85	AUSTRALIA	GREAT SANDY/GIBSON DES.	21.5S	124.5E			35	LO	100	N	N						
94	86	AUSTRALIA	W. COAST, 80-MILE BEACH	20.0S	119.0E			25	HO	100	O	N						
94	87	AUSTRALIA	W. COAST, 80-MILE BEACH	20.0S	120.0E			20	HO	100	N	N						
94	88	AUSTRALIA	L. MACKAY, GIBSON DESERT	22.5S	128.5E			55	LO	100	U	N						
94	89	MOROCCO	ATLAS, QUARKIZ MTNS.	29.0N	9.0W			15	LO	100	N	N						
94	90	ALGERIA	ERG CHECH, KAHAL PLATEAU	26.0N	1.0W			0	LO	100	N	N						
94	91	ALGERIA	ERG CHECH, ERG OCCIDENTAL	28.5N	1.0W			0	LO	100	N	N						
94	92	LIBYA	MARZUQ DESERT	25.0N	13.0E			0	LO	100	N	N						
94	93	CHAD	TIBESTI, PIC TOUSIDE V.	21.0N	17.0E			0	LO	100	N	N						
94	94	CHAD	TIBESTI, EMI KOUSSI VOL.	20.5N	17.5E			0	LO	100	N	N						
94	95	CHAD	TIBESTI, KEGUEUR TERBI	21.5N	18.0E			0	LO	100	N	N						
94	96	SUDAN	NILE R., BAYUDA CRATER	18.0N	33.0E			15	LO	100	N	N						
94	97	ETHIOPIA	RIFT VALLEY, AWASH RIVER	10.5N	40.5E			25	LO	100	N	N						
94	98	DJIBOUTI	AFAR REGION, LAKE ABBE	11.0N	42.0E			15	HO	100	N	N						
94	99	ETHIOPIA	DANAKIL DEP., ERTE ALLE	12.5N	40.5E			15	HO	100	N	N						
94	100	SOMALIA	GULF OF ADEN	11.0N	46.0E			15	HO	100	N	N						
94	101	SOMALIA	COAST, INDIAN OCEAN	5.0N	48.0E			30	HO	100	N	N						
94	102	SOMALIA	HORN OF AFRICA, SOCOTRA	10.5N	51.5E			20	HO	100	N	N						
94	103	INDIAN OCEAN	SUNGLINT, COLLAPSED TS					35	LO	100	U	N						
94	104	INDIAN OCEAN	SUNGLINT, COLLAPSED TS					35	LO	100	U	N						
94	105		GRO IN PAYLOAD BAY					100	N	N								
94	106		GRO IN PAYLOAD BAY					100	N	N								

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	NADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
95	1	YEMEN (ADEN)	OIL SLICKS, SHIP WAKES	1.4N 49.4E 14.6N	49.6E	5	NV	250	N	N	19910406	092300	244	230	77	13
95	2	YEMEN (ADEN)	COAST	1.4N 48.6E 14.4N	50.1E	5	NV	250	N	N	19910406	092309	244	232	77	13
95	3	YEMEN (ADEN)	COAST, OIL SLICKS	14.0N 49.0E 14.3N	50.4E	5	NV	250	N	N	19910406	092313	244	233	76	13
95	4	YEMEN (ADEN)	COAST	14.8N 49.7E 14.2N	50.5E	5	NV	250	N	N	19910406	092316	244	234	76	13
95	5	YEMEN (ADEN)	COAST	14.8N 50.5E 14.1N	50.8E	5	NV	250	N	N	19910406	092321	244	235	76	13
95	6	YEMEN (ADEN)	COAST, SEDIMENT TRANSP.	15.1N 51.4E 13.4N	52.2E	5	NV	250	N	N	19910406	092347	244	241	75	13
95	7	MALDIVES	ATOLLS	4.9N 73.0E 4.2N	69.1E	20	NV	250	N	N	19910406	092901	243	275	59	43
95	8	MALDIVES	ATOLLS	4.4N 73.2E 4.0N	69.5E	10	NV	250	N	N	19910406	092908	243	275	58	13
95	9	MALDIVES	ATOLLS	3.4N 73.2E 3.9N	69.6E	10	NV	250	N	N	19910406	092911	243	275	58	13
95	10	MALDIVES	ATOLLS	2.7N 73.2E 3.8N	69.7E	10	NV	250	N	N	19910406	092913	243	275	58	13
95	11	MALDIVES	ATOLLS	2.2N 73.2E 3.8N	69.8E	10	NV	250	N	N	19910406	092915	243	276	58	13
95	12	MALDIVES	ATOLLS	2.2N 73.2E 3.8N	69.8E	10	NV	250	N	N	19910406	092915	243	276	58	13
95	13	INDIA	SO. COAST, GULF OF MANNAR	9.1N 77.3E 2.5N	72.0E	10	NV	250	N	N	19910406	092958	243	277	56	13
95	14	WESTERN SAHARA	COAST, CONVEYOR BELT	26.8N 9.1N 27.6N	17.2W	5	NV	250	N	N	19910406	104453	246	114	49	14
95	15	WESTERN SAHARA	CONVEYOR BELT, INTERIOR	26.8N 12.9W 27.4N	15.5W	0	NV	250	N	N	19910406	104519	246	116	50	14
95	16	WESTERN SAHARA	EAST INTERIOR	26.7N 9.5W 27.3N	14.6W	0	NV	250	N	N	19910406	104532	246	116	51	14
95	17	MOROCCO	ANTI ATLAS MTNS.	30.5N 8.8W 27.2N	13.7W	10	LO	250	N	N	19910406	104546	246	117	52	14
95	18	MOROCCO	STRAIT OF GIBRALTAR	36.0N 5.5W 26.9N	12.2W	0	HO	250	N	N	19910406	104608	246	118	53	14
95	19	MOROCCO	NORTHEAST MOROCCO	35.2N 4.1W 26.9N	11.8W	0	HO	250	N	N	19910406	104614	246	119	54	14
95	20	MOROCCO	NORTHEAST MOROCCO	34.5N 3.0W 26.8N	11.5W	10	HO	250	N	N	19910406	104619	246	119	54	14
95	21	MOROCCO	NORTHEAST MOROCCO	33.5N 2.0W 26.7N	11.0W	20	HO	250	N	N	19910406	104626	246	120	54	14
95	22	ALGERIA	SCATTERED OASIS	25.6N 25.6N	5.4W	0	NV	250	N	N	19910406	104751	246	125	60	14
95	23	ALGERIA	DESERT	25.3N 25.3N	4.0W	0	NV	250	N	N	19910406	104812	246	127	61	14
95	24	ALGERIA	DISSECTED PLATEAU	24.8N 24.8N	1.9W	0	NV	250	N	N	19910406	104845	246	130	63	14
95	25	ALGERIA	DISSECTED PLATEAU	24.7N 24.7N	1.4W	0	NV	250	N	N	19910406	104853	246	130	63	14
95	26	ALGERIA	AHAGGAR MTNS.	23.3N 4.8E 23.8N	2.0E	0	LO	250	N	N	19910406	104946	246	135	66	14
95	27	ALGERIA	AHAGGAR MTNS.	23.8N 6.5E 23.5N	2.9E	0	LO	250	N	N	19910406	105000	246	137	67	14
95	28	NIGER	AIR MTNS.	19.0N 9.0E 23.2N	3.8E	0	LO	250	N	N	19910406	105015	246	138	68	14
95	29	NIGER	AIR MTNS.	19.0N 9.0E 23.0N	4.5E	0	LO	250	N	N	19910406	105027	246	140	68	14
95	30	ALGERIA	TINRHERT PLATEAU	25.0N 10.0E 22.6N	6.0E	0	LO	250	N	N	19910406	105051	246	142	70	14
95	31	ALGERIA	TINRHERT PLATEAU	25.0N 9.0E 22.5N	6.2E	0	LO	250	N	N	19910406	105054	246	143	70	14
95	32	ALGERIA	TINRHERT PLATEAU	25.0N 9.0E 22.4N	6.4E	0	LO	250	N	N	19910406	105057	245	143	70	14
95	33	NIGER	TINRHERT PLATEAU	23.5N 9.0E 22.4N	6.5E	0	LO	250	N	N	19910406	105059	245	143	70	14
95	34	NIGER	TINRHERT PLATEAU	23.5N 8.0E 22.3N	6.7E	0	LO	250	N	N	19910406	105102	245	144	70	14
95	35	NIGER	TINRHERT PLATEAU	23.0N 8.0E 22.3N	6.8E	0	LO	250	N	N	19910406	105104	245	144	70	14
95	36	NIGER	DESERT, WIND STREAKS	22.2N 22.2N	7.0E	0	NV	250	N	N	19910406	105107	245	145	71	14
95	37	NIGER	DESERT, WIND STREAKS	22.2N 22.2N	7.2E	0	NV	250	N	N	19910406	105110	245	145	71	14
95	38	NIGER	DESERT, WIND STREAKS	22.1N 22.1N	7.4E	0	NV	250	N	N	19910406	105113	245	145	71	14
95	39	NIGER	TINRHERT PLATEAU	24.0N 8.0E 22.1N	7.5E	0	LO	250	N	N	19910406	105115	245	146	71	14
95	40	NIGER	TINRHERT PLATEAU	23.5N 8.0E 22.0N	7.6E	0	LO	250	N	N	19910406	105117	245	146	71	14

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		NADIR		CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN	EL	OR
				LAT	LONG	LAT	LONG												
95	41	NIGER	TINRHET PLATEAU	23.0N	9.0E	22.0N	7.8E	0	LO	250	N	N	19910406	105119	245	146	71	14	
95	42	NIGER	DESERT, WIND STREAKS			22.0N	7.9E	0	NV	250	N	N	19910406	105121	245	147	71	14	
95	43	NIGER	DESERT, WIND STREAKS			21.7N	8.7E	0	NV	250	N	N	19910406	105135	245	149	72	14	
95	44	NIGER	DESERT, WIND STREAKS			21.6N	8.9E	0	NV	250	N	N	19910406	105137	245	149	72	14	
95	45	NIGER	DESERT, WIND STREAKS			21.6N	9.0E	0	NV	250	N	N	19910406	105139	245	149	72	14	
95	46	NIGER	DESERT, WIND STREAKS			21.5N	9.2E	0	NV	250	N	N	19910406	105142	245	150	72	14	
95	47	NIGER	TINRHET PLATEAU	24.0N	10.0E	21.4N	9.5E	0	LO	250	N	N	19910406	105147	245	151	73	14	
95	48	NIGER	TINRHET PLATEAU	24.0N	10.0E	21.3N	9.6E	0	LO	250	N	N	19910406	105150	245	151	73	14	
95	49	NIGER	TINRHET PLATEAU	24.0N	11.0E	21.3N	9.9E	0	LO	250	N	N	19910406	105154	245	152	73	14	
95	50	CHAD	DUST STORM, WIND STREAKS			21.0N	10.7E	0	LO	250	N	N	19910406	105208	245	154	74	14	
95	51	CHAD	DUST STORM, WIND STREAKS			20.9N	10.9E	0	LO	250	N	N	19910406	105210	245	155	74	14	
95	52	CHAD	DUST STORM, WIND STREAKS			20.9N	11.0E	0	LO	250	N	N	19910406	105212	245	155	74	14	
95	53	CHAD	DUST STORM			20.8N	11.1E	0	LO	250	N	N	19910406	105214	245	155	74	14	
95	54	CHAD	DUST STORM			20.7N	11.5E	0	LO	250	N	N	19910406	105220	245	156	74	14	
95	55	CHAD	TIBESTI MTNS.	21.0N	16.5E	20.3N	12.4E	0	LO	250	N	N	19910406	105236	245	160	75	14	
95	56	CHAD	LAKE CHAD	13.0N	13.6E	20.0N	13.2E	20	LO	250	N	N	19910406	105249	245	162	75	14	
95	57	CHAD	SAND, LONGITUDINAL DUNES			19.6N	14.4E	0	LO	250	N	N	19910406	105310	245	167	76	14	
95	58	CHAD	SAND, LONGITUDINAL DUNES			19.5N	14.6E	0	LO	250	N	N	19910406	105313	245	168	76	14	
95	59	CHAD	SAND, LONGITUDINAL DUNES			19.1N	15.6E	0	LO	250	N	N	19910406	105329	245	172	77	14	
95	60	CHAD	SAND, LONGITUDINAL DUNES			19.0N	15.7E	0	LO	250	N	N	19910406	105332	245	173	77	14	
95	61	CHAD	SAND, LONGITUDINAL DUNES			19.0N	15.9E	0	LO	250	N	N	19910406	105335	245	174	77	14	
95	62	CHAD	TIBESTI MTNS.	20.0N	18.6E	18.7N	16.6E	0	LO	250	N	N	19910406	105346	245	177	77	14	
95	63	CHAD	TIBESTI, ENI KOUSSI	19.8N	18.6E	18.3N	17.7E	0	LO	250	N	N	19910406	105405	245	183	78	14	
95	64	CHAD	TIBESTI MTNS, WIND STRKS.	19.5N	19.0E	18.1N	18.0E	0	LO	250	N	N	19910406	105410	245	184	78	14	
95	65	CHAD	WIND STRKS, NR TIBESTI	19.0N	19.5E	18.1N	18.1E	0	LO	250	N	N	19910406	105412	245	185	78	14	
95	66	CHAD	ERG DU DIOURAB, SALT FLTS	17.5N	19.0E	18.0N	18.3E	0	LO	250	N	N	19910406	105415	245	186	78	14	
95	67	CHAD	LARGE SALT FLATS	17.3N	18.6E	17.7N	19.0E	0	LO	250	N	N	19910406	105428	245	190	78	14	
95	68	CHAD	LARGE SALT FLATS	17.0N	18.3E	17.6N	19.3E	0	LO	250	N	N	19910406	105433	245	191	78	14	
95	69	CHAD	LARGE SALT FLATS	17.0N	18.2E	17.5N	19.5E	0	LO	250	N	N	19910406	105437	245	193	78	14	
95	70	CHAD	ENNEDI PLATEAU	17.2N	22.5E	17.2N	20.2E	10	LO	250	N	N	19910406	105449	245	197	78	14	
95	71	CHAD	ENNEDI PLATEAU	17.0N	23.0E	17.0N	20.6E	10	LO	250	N	N	19910406	105455	245	197	78	14	
95	72	CHAD	ENNEDI PLATEAU	17.5N	24.0E	16.8N	21.1E	0	LO	250	N	N	19910406	105504	245	202	78	14	
95	73	CHAD	ENNEDI PLATEAU			16.4N	21.9E	5	LO	250	N	N	19910406	105518	245	207	78	14	
95	74	CHAD	CHAD, SUDAN BORDER	16.0N	23.1E	16.0N	22.9E	0	NV	250	N	N	19910406	105535	244	212	78	14	
95	75	CHAD	CHAD, SUDAN BORDER	15.7N	23.0E	15.8N	23.4E	10	LO	250	N	N	19910406	105544	244	215	78	14	
95	76	SUDAN	WEST CENTRAL SUDAN			15.6N	23.8E	20	LO	250	N	N	19910406	105551	244	218	78	14	
95	77	SUDAN	WEST CENTRAL SUDAN			15.5N	23.9E	30	LO	250	N	N	19910406	105554	244	219	78	14	
95	78	SUDAN	SUDAN, CHAD BORDER			15.0N	24.9E	0	LO	250	N	N	19910406	105611	244	224	78	14	
95	79	SUDAN				14.6N	25.8E	80	LO	250	N	N	19910406	105628	244	229	77	14	
95	80	SUDAN	SW OF AL UBAYYID, WADI			14.2N	26.7E	5	LO	250	N	N	19910406	105643	244	233	77	14	

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LAT	MADIR LAT LAT	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL	OR
95	81	SUDAN	SW OF AL UBAYYID, WADI	13.6N	27.8E	5	NV	250	N	N	19910406	105703	244	238	76	14
95	82	SUDAN	SW OF AL UBAYYID, WADI	13.6N	28.0E	10	NV	250	N	N	19910406	105706	244	239	76	14
95	83	SUDAN		12.9N	29.3E	40	LO	250	N	N	19910406	105730	244	244	75	14
95	84	SUDAN		12.6N	29.8E	10	LO	250	N	N	19910406	105739	244	246	75	14
95	85	SUDAN	WHITE NILE, N. OF KUSTI	13.1N	32.3E	50	LO	250	N	N	19910406	105820	244	253	73	14
95	86	SUDAN	WHITE NILE, CULTVD FIELDS	14.2N	32.6E	40	LO	250	N	N	19910406	105825	244	254	73	14
95	87	SUDAN	WHITE NILE, SO. OF KUSTI	11.2N	32.6E	80	LO	250	N	N	19910406	105830	244	255	72	14
95	88	SUDAN	WHITE NILE, SO. OF KUSTI	11.9N	32.8E	60	NV	250	N	N	19910406	105834	244	255	72	14
95	89	SUDAN	WHITE NILE, SO. OF KUSTI	11.0N	32.7E	70	NV	250	N	N	19910406	105837	244	256	72	14
95	90	SUDAN	WHITE NILE, SO. OF KUSTI	10.5N	32.3E	90	LO	250	N	N	19910406	105841	244	256	72	14
95	91	ETHIOPIA	ETHIOPIAN PLATEAU, RESVR	9.2N	36.3E	60	LO	250	N	N	19910406	105935	244	263	69	14
95	92	ETHIOPIA	ETHIOPIAN PLATEAU, LAKES	6.0N	37.8E	60	LO	250	N	N	19910406	105946	244	264	68	14
95	93	ETHIOPIA	RIFT VALLEY, LAKE	8.7N	37.2E	70	LO	250	N	N	19910406	105956	244	265	68	14
95	94	ETHIOPIA	RIFT VALLEY, ABAYA	6.3N	37.8E	60	LO	250	N	N	19910406	110020	243	267	67	14
95	95	ETHIOPIA	ETHIOPIAN PLATEAU	7.3N	38.8E	80	LO	250	N	N	19910406	110044	243	269	65	14
95	96	ETHIOPIA	SE ETHIOPIA	6.8N	40.7E	40	LO	250	N	N	19910406	110102	243	270	84	14
95	97	ETHIOPIA	SE ETHIOPIA	6.7N	40.9E	30	LO	250	N	N	19910406	110105	243	270	84	14
95	98	ETHIOPIA	SE ETHIOPIA	6.5N	41.1E	30	LO	250	N	N	19910406	110109	243	271	64	14
95	99	ETHIOPIA	SE ETHIOPIA	6.2N	41.6E	30	LO	250	N	N	19910406	110119	243	271	63	14
95	100	ETHIOPIA	SE ETHIOPIA, RED SOILS	5.9N	42.2E	20	LO	250	N	N	19910406	110130	243	272	63	14
95	101	ETHIOPIA	SE ETHIOPIA, RED SOILS	5.7N	42.6E	50	LO	250	N	N	19910406	110137	243	272	62	14
95	102	ETHIOPIA	SE ETHIOPIA, RED SOILS	5.6N	42.8E	40	LO	250	N	N	19910406	110141	243	273	62	14
95	103	ETHIOPIA	SE ETHIOPIA, RED SOILS	5.5N	43.0E	30	LO	250	N	N	19910406	110145	243	273	62	14
95	104	ETHIOPIA	SE ETHIOPIA, RED SOILS			40	LO	250	N	N						
96	1		GRO PAYLOAD													
96	2		GRO PAYLOAD													
96	3		GRO PAYLOAD													
96	4	PACIFIC OCEAN	GRO, PEARL + HERMES REEF	28.0N	176.0W	15	NV	100	N	N						
96	5		GRO PAYLOAD													
96	6		GRO PAYLOAD													
96	7		GRO PAYLOAD													
96	8		GRO PAYLOAD													
96	9		GRO PAYLOAD													
96	10		GRO PAYLOAD													
96	11		GRO PAYLOAD													
96	12		GRO PAYLOAD													
96	13		GRO PAYLOAD													
96	14		GRO PAYLOAD													
96	15		GRO PAYLOAD													
96	16		GRO PAYLOAD													

TABLE 4.3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	ON	MADIR LAT	ON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
96	17		GRO PAYLOAD															N
96	18		GRO PAYLOAD															N
96	19		GRO PAYLOAD															N
96	20		GRO PAYLOAD															N
96	21		GRO PAYLOAD															N
96	22		GRO PAYLOAD															N
96	23		GRO PAYLOAD															N
96	24		GRO PAYLOAD															N
96	25	CHINA	TIBET PLAT., HIMALAYAS	30.0N	83.0E			30	LO	100	N	Y						N
96	26	CHINA	TIBET PLAT., HIMALAYAS	29.0N	84.0E			35	LO	100	N	Y						N
96	27	CHINA	TIBET PLAT., HIMALAYAS	29.0N	85.5E			25	LO	100	N	Y						N
96	28	CHINA	TIBET PLAT., HIMALAYAS	30.5N	86.5E			15	LO	100	N	Y						N
96	29	CHINA	TIBET PLAT., HIMALAYAS	30.0N	88.0E			25	LO	100	N	Y						N
96	30	CHINA	TIBET PLAT., HIMALAYAS	30.5N	89.0E			35	LO	100	N	Y						N
96	31	CHINA	TIBET PLAT., HIMALAYAS	30.0N	90.5E			55	LO	100	N	Y						N
96	32	CHINA	TIBET PLAT., HIMALAYAS	29.0N	96.5E			35	HO	100	N	N						N
96	33	BURMA	FOLDED RANGES					80	LO	100	N	N						N
96	34	CHINA	FOLDED RANGES, SALWEEN R	24.5N	99.0E			60	LO	100	N	N						N
96	35	CHINA	FOLDED RANGES, MEKONG R.	27.5N	101.5E			50	LO	100	N	Y						N
96	36	CHINA	FOLDED RANGES, MEKONG R.	27.5N	102.0E			45	LO	100	N	Y						N
96	37	PACIFIC OCEAN	CLOUDS, SUNGLINT					60	HO	100	N	N						N
96	38	MAURITANIA	RICHTAT ST., ANTI ATLAS	25.0N	11.5W			10	HO	100	N	N						N
96	39	CAPE VERDE ISLANDS	ISLAND, CLOUD WAKES	16.5N	23.5W			40	HO	100	N	N						N
96	40	CAPE VERDE ISLANDS	ISLAND, CLOUD WAKES	16.0N	23.0W			35	HO	100	N	N						N
96	41	GAMBIA	DAKAR, GAMBIA R., GEBIA R	13.5N	15.5W			0	LO	100	N	Y						N
96	42	SENEGAL	DAKAR, GAMBIA R., GEBIA R	13.0N	15.0W			0	LO	100	N	Y						N
96	43	ATLANTIC OCEAN	PAYLOAD BAY					35	HO	100	N	N						N
96	44	ATLANTIC OCEAN	PAYLOAD BAY					35	HO	100	N	N						N
96	45	BOTSWANA	MAKARIKARI PAN, OKAVANGO	21.0S	26.0E			15	LO	100	N	Y						N
96	46	ZIMBABWE	MAKARIKARI P., GREAT DIKE	20.0S	27.0E			10	LO	100	N	Y						N
96	47	ZIMBABWE	MAKARIKARI P., GREAT DIKE	20.0S	28.5E			20	HO	100	N	Y						N
96	48	NAMIBIA	NAMIB DESERT, DUST STORM	25.0S	15.0E			0	LO	100	N	Y						N
96	49	NAMIBIA	NAMIB DESERT, DUST STORM	25.0S	14.5E			0	LO	100	N	Y						N
96	50	MEXICO	SIERRA MADRE DEL SUR	21.0N	101.0W			40	LO	100	N	N						N
96	51	NICARAGUA	L. NICARAGUA, MASAYA VOL	13.5N	85.5W			45	LO	100	N	N						N
96	52	COSTA RICA	L. NICARAGUA, NICOYA PEN	11.0N	85.5W			55	LO	100	N	Y						N
96	53	PANAMA	CANAL ZONE, COLON	9.0N	80.0W			60	LO	100	N	Y						N
96	54	PANAMA	CANAL ZONE, COLON	9.0N	79.0W			80	LO	100	N	Y						N
96	55	PANAMA	CANAL ZONE, PANAMA CITY	9.0N	80.0W			80	LO	100	N	Y						N
96	56	BRAZIL	AMAZON RIVER	2.0S	56.0W			70	LO	100	N	Y						N



TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	NADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	EL	OR
96	57	BRAZIL	AMAZON RIVER	2.0S 55.0W		70	LO	100	N	Y						
96	58	BRAZIL	SAO FRANCISCO RIVER	9.5S 40.5W		65	LO	100	N	Y						
96	59	BRAZIL	SAO FRANCISCO RIVER	8.5S 40.5W		55	LO	100	N	Y						
96	60	BRAZIL	SAO FRANCISCO RIVER	9.0S 40.0W		70	HO	100	N	Y						
96	61	BRAZIL	COAST NEAR CARAVELAS	18.0S 38.0W		65	HO	100	U	N						
96	62	ARGENTINA	NEAR POZUELOS LAGOON	23.5S 66.0W		50	LO	100	N	Y						
96	63	ARGENTINA	NEAR POZUELOS LAGOON	22.5S 65.5W		45	LO	100	N	Y						
96	64	ARGENTINA	CHACO PLAIN, LAND USE			30	LO	100	U	N						
96	65	ARGENTINA	CHACO PLAIN, LAND USE			30	LO	100	U	Y						
96	66	ARGENTINA	CHACO PLAIN, LAND USE			35	LO	100	U	Y						
96	67	PARAGUAY	PARANA R., BORDER LAND U	25.0S 55.5W		30	NV	100	U	Y						
96	68	PARAGUAY	PARANA R., BORDER LAND U	25.0S 54.5W		25	NV	100	U	Y						
96	69		BLANK													
96	70		BLANK													
96	71	UNITED ARAB EMIRATES	SAND DUNES, PERSIAN GULF	24.0N 51.0E		65	HO	100	N	N						
96	72	UNITED ARAB EMIRATES	SAND DUNES, PERSIAN GULF	23.5N 52.0E		55	HO	100	N	N						
96	73	SOCOTRA	SOCOTRA ISLAND	11.5N 54.0E		5	LO	100	N	N						
96	74															
96	75	LIBYA	MARZUQ DES., TCHIGAI P.	23.5N 13.0E		0	LO	100	N	Y						
96	76	NIGER	MARZUQ DES., TCHIGAI P.	22.0N 12.5E		0	LO	100	N	Y						
96	77	NIGER	TCHIGAI PLATEAU	21.0N 13.0E		0	LO	100	N	Y						
96	78	CHAD	TIBESTI, PIC TOUSIDE	21.0N 17.0E		0	LO	100	N	N						
96	79	CHAD	TIBESTI, EMI KOUSSI	20.5N 18.5E		0	LO	100	N	N						
96	80	CHAD	DESERT E. OF TIBESTI	19.5N 19.5E		0	LO	100	N	Y						
96	81	CHAD	DESERT E. OF TIBESTI	20.5N 20.0E		0	LO	100	N	Y						
96	82	CHAD	DESERT N. OF ENNEDI PLAT	19.0N 22.0E		0	LO	100	N	Y						
96	83	CHAD	DESERT N. OF ENNEDI PLAT	18.0N 22.0E		0	LO	100	N	Y						
96	84	CHAD	ENNEDI P., MOURDI DEPRES	18.0N 23.0E		5	LO	100	N	Y						
96	85	CHAD	MOURDI DEPRESSION, DUST	18.5N 23.5E		5	LO	100	N	Y						
96	86	SUDAN	DUST E. OF ENNEDI PLAT.	19.0N 24.5E		5	LO	100	N	Y						
96	87	SUDAN	TEIGA PLATEAU, DUST			10	LO	100	N	N						
96	88	SUDAN	REGION NEAR TIEGA PLAT.			5	LO	100	N	Y						
96	89	SUDAN	TEIGA PLAT., TEIJO HILL	15.0N 26.0E		15	LO	100	N	N						
96	90	SUDAN	DESERT, ESCARP. W NILE R	12.5N 30.5E		30	LO	100	N	N						
96	91	SUDAN	NILE R. N OF KHARTOUM	16.0N 33.5E		55	LO	100	U	N						
96	92	SUDAN	SUDAN AG., NILE RIVER	14.0N 33.0E		15	LO	100	U	N						
96	93	SUDAN	SUDAN AG., BLUE NILE R.	13.5N 33.5E		10	LO	100	U	Y						
96	94	ETHIOPIA	BLUE NILE, PLATEAU	10.5N 35.5E		5	LO	100	N	N						
96	95	ETHIOPIA	LAKE TANA	12.0N 37.0E		10	NV	100	N	N						
96	96	ETHIOPIA	LAKE TANA	12.0N 37.5E		10	NV	100	U	N						

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	CENTER LON	MADIR LAT	MADIR LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL	OR
96	97	ETHIOPIA	FERIT MTN., CITY OF DESE	11.0N	38.5E			10	LO	100	N	N						
96	98	ETHIOPIA	AFAR, DANAKIL PLAIN	12.0N	41.0E			10	LO	100	N	N						
96	99	ETHIOPIA	RIFT VALLEY, AWASH RIVER	10.0N	40.5E			30	LO	100	N	Y						
96	100	SOMALIA	COAST, TADJOURA GULF	10.0N	44.0E			30	LO	100	N	N						
96	101	SOMALIA	COAST, CARCAR MTHS.	9.5N	45.5E			50	LO	100	N	Y						
96	102	ETHIOPIA	DESERT, CLOUDS					75	LO	100	N	N						
96	103	GULF OF ADEN	VALE OF TEARS ST. AFAR	11.5N	42.5E			15	HO	100	N	N						
96	104	SOMALIA	COAST NEAR MABBER POINT	8.0N	48.5E			50	LO	100	N	N						
96	105	SOMALIA	COAST S. OF NEGRO BAY	7.0N	48.0E			40	LO	100	N	N						
96	106	SOMALIA	COAST S. OF NEGRO BAY	7.5N	48.5E			40	LO	100	N	Y						
96	107	SOMALIA	NEGRO BAY	8.0N	49.0E			40	LO	100	N	Y						
97	1	ALGERIA	TINRHERT PLATEAU	28.0N	2.0E	28.3N	0.5W	0	HO	250	N	N	19910406	090941	246	109	43	13
97	2	ALGERIA	GRAND ERG ORIENTAL	30.0N	7.0E	28.3N	0.0E	5	HO	250	N	N	19910406	090949	246	109	43	13
97	3	LIBYA	COAST, VRY CLOUDY			28.2N	0.7E	95	HO	250	N	N	19910406	090959	246	110	44	13
97	4	ALGERIA	TINRHERT PLATEAU	28.0N	4.0E	28.2N	1.2E	0	HO	250	N	N	19910406	091007	246	110	44	13
97	5	ALGERIA	TINRHERT PLATEAU	28.0N	5.0E	28.1N	1.7E	0	HO	250	N	N	19910406	091014	246	111	45	13
97	6	ALGERIA	TINRHERT PLAT., MARZUQ	26.0N	11.0E	28.0N	3.8E	0	HO	250	N	N	19910406	091044	246	112	47	13
97	7	ALGERIA	GRAND ERG ORIENTAL	30.5N	6.5E	27.8N	5.0E	0	LO	250	N	N	19910406	091102	246	113	48	13
97	8	LIBYA	MARZUQ DESERT, BLK HARUJ	26.0N	12.5E	27.6N	7.2E	0	LO	250	N	N	19910406	091134	246	115	50	13
97	9	LIBYA	MARZUQ DESERT, BLK HARUJ	26.0N	14.0E	27.2N	10.1E	0	LO	250	N	N	19910406	091218	246	117	52	13
97	10	LIBYA	BLACK HARUJ	27.0N	18.3E	27.0N	11.5E	0	LO	250	N	N	19910406	091239	246	119	54	13
97	11	LIBYA	BLACK HARUJ, REBIANA SAND	25.0N	21.0E	28.4N	14.5E	0	LO	250	N	N	19910406	091324	246	122	56	13
97	12	LIBYA	BLACK HARUJ, REBIANA SAND	25.5N	21.0E	26.3N	15.4E	0	LO	250	N	N	19910406	091337	246	123	57	13
97	13	LIBYA	COAST			26.1N	16.5E	10	HO	250	N	N	19910406	091355	246	124	58	13
97	14	LIBYA	LIBYAN DESERT, CTR. PST. IR	26.3N	23.0E	25.7N	18.3E	0	LO	250	N	N	19910406	091422	246	126	60	13
97	15	LIBYA	LIBYAN DESERT, CTR. PST. IR	25.0N	24.0E	25.5N	19.1E	0	LO	250	N	N	19910406	091434	246	127	60	13
97	16	LIBYA	LIBYAN DESERT, CTR. PST. IR	25.0N	24.0E	25.3N	19.9E	0	LO	250	N	N	19910406	091447	246	128	61	13
97	17	LIBYA	COAST			25.1N	20.8E	0	HO	250	N	N	19910406	091500	246	129	62	13
97	18	LIBYA	LIBYAN DESERT	23.5N	25.0E	25.0N	21.3E	0	LO	250	N	N	19910406	091509	246	129	62	13
97	19	EGYPT	CENTRAL, NILE, SINAI	27.5N	30.0E	24.5N	23.1E	0	HO	250	N	N	19910406	091536	246	132	64	13
97	20	EGYPT	SO. CENTRAL, NILE			24.1N	24.6E	5	HO	250	N	N	19910406	091600	246	134	65	13
97	21	EGYPT	SO. CENTRAL, NILE			24.0N	25.2E	5	HO	250	N	N	19910406	091609	246	135	66	13
97	22	EGYPT	NILE VALLEY, SINAI	28.5N	32.0E	23.8N	25.7E	0	HO	250	N	N	19910406	091618	246	136	66	13
97	23	EGYPT	NILE VALLEY, SINAI	28.5N	29.0E	23.6N	26.4E	0	HO	250	N	N	19910406	091628	246	137	67	13
97	24	EGYPT	LAKE MASSER	22.7N	32.8E	23.3N	27.5E	5	LO	250	N	N	19910406	091646	246	139	68	13
97	25	EGYPT	NILE RIVER, RED SEA	25.8N	33.8E	23.0N	28.4E	5	LO	250	N	N	19910406	091701	246	141	69	13
97	26	EGYPT	NILE RIVER, RED SEA, SINAI	29.5N	33.5E	22.9N	28.9E	0	LO	250	N	N	19910406	091709	246	142	69	13
97	27	EGYPT	NILE RIVER, RED SEA, SINAI	29.5N	34.0E	22.6N	29.7E	0	HO	250	N	N	19910406	091721	246	143	70	13
97	28	EGYPT	ARABIAN DESERT			22.4N	30.4E	10	LO	250	N	N	19910406	091732	245	144	70	13
97	29	EGYPT	SE. EGYPT	23.0N	34.0E	22.2N	31.0E	5	LO	250	N	N	19910406	091743	245	146	71	13

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	NADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL	OR	
97	30	EGYPT	SE.EGYPT, RED SEA	21.4N	33.3E	10	LO	250	N	N	19910406	091820	245	152	73	13	
97	31	SAUDI ARABIA		20.2N	36.7E	95	HO	250	N	N	19910406	091917	245	163	75	13	
97	32	RED SEA	VIEW SOUTHEAST	20.0N	37.2E	30	HO	250	N	N	19910406	091925	245	165	75	13	
97	33	SAUDI ARABIA	MASSIVE,EMPTY QUARTER	17.0N	45.0E	30	LO	250	N	N	19910406	091954	245	172	76	13	
97	34	SAUDI ARABIA	EMPTY QUARTER	17.0N	46.0E	18.6N	40.6E	10	LO	250	N	19910406	092023	245	180	77	13
97	35	SAUDI ARABIA	YEMEN (ADEN), GULF ADEN	14.5N	47.9E	18.2N	41.6E	5	HO	250	N	19910406	092040	245	185	78	13
97	36	SAUDI ARABIA	EMPTY QTR.,YEMEN(ADEN)	16.5N	46.5E	18.0N	42.2E	5	LO	250	N	19910406	092049	245	188	78	13
97	37	YEMEN (ADEN)	COAST	15.5N	49.4E	16.7N	45.1E	5	LO	250	N	19910406	092140	245	204	78	13
97	38	YEMEN (ADEN)	COAST	15.5N	50.5E	16.2N	46.3E	5	LO	250	N	19910406	092201	245	211	78	13
97	39	YEMEN (ADEN)	COAST	15.5N	50.5E	16.1N	46.6E	5	LO	250	N	19910406	092206	244	213	78	13
97	40	SOCOTRA		12.5N	54.0E	15.6N	47.6E	20	HO	250	N	19910406	092224	244	219	78	13
97	41	SAUDI ARABIA	RUB AL KHALI	15.1N	48.6E			0	HO	250	N	19910406	092241	244	224	77	13
97	42	MALDIVES	INDIAN OCEAN	5.5N	66.8E			40	HO	250	N	19910406	092818	243	273	61	13
97	43	MALDIVES	ATOLLS	4.0N	73.0E	5.3N	67.2E	50	LO	250	N	19910406	092825	243	273	61	13
97	44	MALDIVES	ATOLLS	3.8N	73.2E	4.2N	69.1E	50	LO	250	N	19910406	092900	243	275	59	13
97	45	MALDIVES	ATOLLS	3.3N	73.3E	4.0N	69.5E	40	LO	250	N	19910406	092908	243	275	58	13
97	46	MALDIVES	ATOLLS	2.4N	73.2E	3.7N	69.9E	50	LO	250	N	19910406	092917	243	276	58	13
97	47	MALDIVES	ATOLLS	0.8N	73.2E	3.4N	70.4E	40	LO	250	N	19910406	092926	243	276	57	13
97	48	MALDIVES	ATOLLS	3.1N	70.9E			40	LO	250	N	19910406	092936	243	276	57	13
97	49	MALDIVES	ATOLLS	3.6N	73.4E	2.8N	71.5E	40	LO	250	N	19910406	092947	243	277	56	13
97	50		CARGO BAY, EARTH LIM.	18.6N	80.1W			100	N	N	19910406	102853	245	79	-10	14	
97	51		CARGO BAY, EARTH LIM.	18.8N	79.6W			100	N	N	19910406	102902	245	79	-10	14	
97	52		CARGO BAY, EARTH LIM.	19.0N	79.1W			250	N	N	19910406	102910	245	79	-9	14	
97	53		CARGO BAY, EARTH LIM.	19.2N	78.5W			250	N	N	19910406	102920	245	79	-9	14	
97	54		CARGO BAY, EARTH LIM.	19.5N	78.0W			250	N	N	19910406	102930	245	80	-8	14	
97	55	CANARY ISLANDS	DK.IMAGE,CLOUD VORTEXES	28.2N	22.1W	28.1N	22.2W	90	LO	250	N	19910406	104339	246	110	44	14
97	56	CANARY ISLANDS	DK.IMAGE,CLOUD VORTEXES	28.0N	19.8W	28.0N	20.0W	90	LO	250	N	19910406	104412	246	112	46	14
97	57	WESTERN SAHARA	COAST	26.4N	13.0W	27.5N	15.7W	30	LO	250	N	19910406	104516	246	115	50	14
97	58	CANARY ISLANDS	LAS PALMAS	28.0N	15.6W	27.2N	13.9W	70	LO	250	N	19910406	104543	246	117	52	14
97	59	CANARY ISLANDS	SANTA CRUZ, LAS PALMAS	28.1N	17.0W	27.1N	13.4W	70	LO	250	N	19910406	104550	246	117	52	14
97	60	WESTERN SAHARA	NO. CENTRAL	26.9N	11.0W	27.0N	12.6W	5	LO	250	N	19910406	104602	246	118	53	14
97	61	WESTERN SAHARA	NO. CENTRAL	26.2N	11.0W	26.8N	11.4W	0	LO	250	N	19910406	104620	246	119	54	14
97	62	WESTERN SAHARA	COAST,CONVEYER BELT SCAR	26.9N	12.0W	26.6N	10.4W	10	LO	250	N	19910406	104635	246	120	55	14
97	63	ALGERIA	ERG IGUIDI,W.ALGERIA	26.4N	8.5W	26.3N	8.7W	0	LO	250	N	19910406	104701	246	122	56	14
97	64	ALGERIA	NW. MAURITANIA	25.6N	4.6W	25.8N	6.3W	0	LO	250	N	19910406	104737	246	124	59	14
97	65	ALGERIA	NW. MAURITANIA	25.6N	4.6W	25.5N	4.8W	0	LO	250	N	19910406	104801	246	126	60	14
97	66	MAURITANIA	VIEW TO SE,NIGER RIVER	25.2N	3.6W			0	HO	250	N	19910406	104818	246	127	61	14
97	67	MAURITANIA	VIEW TO SE,NIGER RIVER	25.1N	3.1W			0	HO	250	N	19910406	104826	246	128	62	14
97	68	ALGERIA	TANEZROUFT REGION	24.3N	0.1E			0	LO	250	N	19910406	104916	246	132	64	14
97	69	ALGERIA	TANEZROUFT REGION	24.1N	1.0E			0	LO	250	N	19910406	104930	246	133	65	14

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	CENTER LON	MAOIR LAT	MAOIR LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
97	70	ALGERIA	TANEZROUFT REGION	24.8N	9.5E	22.2N	7.1E	0	LO	250	N	N	19910406	104956	246	136	67	14
97	71	ALGERIA	TANEZROUFT REGION	24.8N	9.5E	22.2N	7.1E	0	LO	250	N	N	19910406	105011	246	138	67	14
97	72	LIBYA	W.EDGE MARZUQ DESERT	24.0N	12.0E	22.1N	7.4E	0	LO	250	N	N	19910406	105108	245	144	71	14
97	73	LIBYA	W.EDGE MARZUQ DESERT	24.0N	12.0E	22.1N	7.4E	0	LO	250	N	N	19910406	105113	245	145	71	14
97	74	NIGER	PLATEAU DU DJADO	22.0N	15.0E	21.8N	8.4E	0	LO	250	N	N	19910406	105129	245	147	72	14
97	75	CHAD	TIBESTI MTNS.	21.0N	16.5E	21.5N	9.1E	0	LO	250	N	N	19910406	105141	245	148	72	14
97	76	CHAD	TIBESTI MTNS.	20.4N	18.0E	20.5N	12.1E	0	LO	250	N	N	19910406	105230	245	158	74	14
97	77	CHAD	TIBESTI MTNS.	21.0N	16.5E	20.2N	12.7E	0	LO	250	N	N	19910406	105241	245	160	75	14
97	78	CHAD	TIBESTI MTNS.	21.0N	18.0E	19.3N	15.0E	0	LO	250	N	N	19910406	105320	245	169	76	14
97	79	CHAD	TIBESTI MTNS.,EMI KOUSSI	19.8N	18.5E	18.8N	16.3E	0	LO	250	N	N	19910406	105342	245	175	77	14
97	80	CHAD	ENNEDI PLAT.	17.2N	22.8E	17.9N	18.4E	10	LO	250	N	N	19910406	105418	245	186	78	14
97	81	CHAD	ENNEDI PLAT.	17.0N	23.0E	17.7N	19.1E	10	LO	250	N	N	19910406	105429	245	189	78	14
97	82	CHAD	ENNEDI PLAT.	17.0N	23.0E	17.4N	19.6E	0	LO	250	N	N	19910406	105438	245	192	78	14
97	83	SUDAN				16.8N	21.0E	40	LO	250	N	N	19910406	105502	245	201	78	14
97	84	SUDAN	NW.DESERT,PANORAMA			16.1N	22.6E	0	HO	250	N	N	19910406	105530	244	210	78	14
97	85	SUDAN	NW.DESERT,PANORAMA			15.4N	24.2E	5	HO	250	N	N	19910406	105558	244	220	78	14
97	86	SUDAN				14.9N	25.2E	50	LO	250	N	N	19910406	105617	244	225	77	14
97	87	SUDAN	WHITE NILE			14.1N	26.9E	30	HO	250	N	N	19910406	105647	244	233	77	14
97	88	SUDAN	AGRICULTURAL FIELDS	14.0N	33.0E	13.3N	28.4E	50	LO	250	N	N	19910406	105714	244	240	76	14
97	89	SUDAN	AGRICULTURAL FIELDS	14.0N	33.0E	13.0N	29.1E	50	LO	250	N	N	19910406	105727	244	243	75	14
97	90	SUDAN	AGRICULTURAL FIELDS	14.0N	33.0E	12.7N	29.7E	50	LO	250	N	N	19910406	105737	244	245	75	14
97	91	ETHIOPIA	PANORAMA,GULF ADEN			10.8N	33.3E	60	HO	250	N	N	19910406	105843	244	256	72	14
97	92	GULF OF ADEN	PANORAMA			8.2N	38.2E	40	HO	250	N	N	19910406	110015	243	266	67	14
97	93	ETHIOPIA	PANORAMA			7.5N	39.5E	60	LO	250	N	N	19910406	110038	243	268	66	14
97	94	ETHIOPIA	SOMALI,E.TIP OF AFRICA			6.8N	40.9E	70	HO	250	N	N	19910406	110106	243	270	64	14
97	95	ETHIOPIA	SOMALI,E.TIP OF AFRICA			6.4N	41.4E	70	HO	250	N	N	19910406	110114	243	271	64	14
97	96	ETHIOPIA	SOMALI,E.TIP OF AFRICA			6.1N	41.8E	70	HO	250	N	N	19910406	110123	243	271	63	14
97	97	SOMALI	COAST			4.9N	44.0E	60	LO	250	N	N	19910406	110204	243	274	61	14
97	98	INDIAN OCEAN	PANORAMA			0.8N	51.1E	50	HO	250	N	N	19910406	110419	243	279	53	14
97	99	INDIAN OCEAN	CLOUD PATTERNS			0.1N	52.2E	60	HO	250	N	N	19910406	110441	243	280	51	14
97	100	INDIAN OCEAN	CLOUD PATTERNS			2.5S	56.7E	50	HO	250	N	N	19910406	110606	243	281	46	14
97	101	USA-FL	SO.FL.,EVERGLADES,CLOUDS.	25.2N	80.6W	25.6N	81.8W	90	LO	250	N	N	19910406	120818	246	88	11	15
97	102	BAHAMAS	ANDROS IS.,CLDY,HAZY	24.5N	78.5W	25.9N	80.7W	70	LO	250	N	N	19910406	120836	246	88	12	15
97	103	USA-FL	SO. FL., EVERGLADES	25.0N	80.6W	26.1N	79.4W	60	LO	250	N	N	19910406	120855	246	89	13	15
97	104	BAHAMAS	CLDY,HAZY. NEAR ANDROS I			26.7N	76.2W	60	LO	250	N	N	19910406	120944	246	91	16	15
97	105	BAHAMAS	ANDROS IS.,HAZY,CLDY	24.8N	78.0W	26.9N	75.4W	60	LO	250	N	N	19910406	120956	246	91	17	15
97	106	BAHAMAS	ANDROS IS.,HAZY,CLDY			27.2N	73.1W	80	LO	250	N	N	19910406	121030	246	92	19	15
97	107	ATLANTIC OCEAN	CLOUDS			28.0N	66.7W	70	LO	250	N	N	19910406	121205	246	96	25	15
98	1	SAUDI ARABIA	COAST,RED SEA,JIZAN AREA	16.5N	43.0E	18.2N	43.5E	0	LO	250	N	N	19910407	084212	245	150	76	28
98	2	YEMEN (SANA)	COAST,RED SEA	16.0N	43.0E	18.0N	44.2E	0	LO	250	N	N	19910407	084223	245	152	77	28

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL	OR
98	3	SAUDI ARABIA	EMPTY QTR., LONG. DUNES	17.8N 44.6E	17.8N 44.6E	0	LO	250	N	N	19910407	084230	245	164	77	28
98	4	YEMEN (SANA)	CULTIVATED VALLEYS	17.7N 44.8E	17.7N 44.8E	0	LO	250	N	N	19910407	084234	245	155	77	28
98	5	SAUDI ARABIA	EMPTY QUARTER	16.9N 46.7E	16.9N 46.7E	5	LO	250	N	N	19910407	084307	245	163	79	28
98	6	SAUDI ARABIA	EMPTY QUARTER	16.3N 47.9E	16.3N 47.9E	5	LO	250	N	N	19910407	084328	245	169	80	28
98	7	YEMEN (ADEN)	COAST, BURUM	14.8N 49.0E	14.8N 49.0E	10	LO	250	N	N	19910407	084344	245	175	80	28
98	8	YEMEN (ADEN)	COAST, GULF OF ADEN	15.0N 50.0E	15.0N 50.0E	10	LO	250	N	N	19910407	084421	245	190	81	28
98	9	SOCOTRA	SUNGLINT, WAVE PATTERNS	12.5N 54.0E	12.5N 54.0E	20	LO	250	N	N	19910407	084500	245	208	81	28
98	10	SOCOTRA	SUNGLINT, WAVE PATTERNS	13.3N 54.3E	13.3N 54.3E	5	LO	250	N	N	19910407	084522	245	218	81	28
98	11	INDIAN OCEAN	SUNGLINT, WAVE PATTERNS	12.7N 55.5E	12.7N 55.5E	10	LO	250	N	N	19910407	084543	245	227	81	28
98	12	INDIAN OCEAN	SUNGLINT, WAVE PATTERNS	10.8N 59.1E	10.8N 59.1E	40	LO	250	N	N	19910407	084649	244	248	79	28
98	13	INDIAN OCEAN	SUNGLINT, WAVE PATTERNS	10.6N 59.5E	10.6N 59.5E	40	LO	250	N	N	19910407	084657	244	250	78	28
98	14	AUSTRALIA-WA	NW. CAPE, EXMOUTH GULF	22.0S 114.0E	22.0S 114.0E	10	LO	250	N	N	19910407	090343	243	283	17	28
98	15	AUSTRALIA-WA	BARROW ISLAND	20.8S 115.4E	20.8S 115.4E	0	LO	250	N	N	19910407	090356	243	283	16	28
98	16	AUSTRALIA-WA	EXMOUTH GULF, NW. CAPE	21.8S 114.5E	21.8S 114.5E	30	LO	250	N	N	19910407	090402	243	283	16	28
98	17	AUSTRALIA-WA	NE OF EXMOUTH GULF	21.5S 115.5E	21.5S 115.5E	30	LO	250	N	N	19910407	090405	243	283	16	28
98	18	AUSTRALIA-WA	NE OF EXMOUTH GULF	21.2S 115.8E	21.2S 115.8E	20	LO	250	N	N	19910407	090409	243	283	15	28
98	19	AUSTRALIA-WA	DAMPIER ARCH., DAMPIER	20.7S 116.8E	20.7S 116.8E	30	LO	250	N	N	19910407	090421	243	282	14	28
98	20	AUSTRALIA-WA	E. OF DAMPIER, ROEBOURNE	20.8S 117.2E	20.8S 117.2E	30	LO	250	N	N	19910407	090426	243	282	14	28
98	21	AUSTRALIA-WA	YULE & TURNER RIVERS	20.8S 118.1E	20.8S 118.1E	0	LO	250	N	N	19910407	090430	243	282	14	28
98	22	AUSTRALIA-WA	PORT HEDLAND	20.6S 118.4E	20.6S 118.4E	0	LO	250	N	N	19910407	090449	243	282	13	28
98	23	AUSTRALIA-WA	PORT HEDLAND, DE SHAW RVR	20.4S 119.2E	20.4S 119.2E	0	LO	250	N	N	19910407	090454	243	282	12	28
98	24	AUSTRALIA-WA	MOUNT GOLDSWORTHY	20.3S 119.8E	20.3S 119.8E	0	LO	250	N	N	19910407	090501	243	282	12	28
98	25	AUSTRALIA-WA	GEORGE RANGE	21.0S 119.5E	21.0S 119.5E	0	LO	250	N	N	19910407	090511	243	281	11	28
98	26	AUSTRALIA-WA	GEORGE RANGE	21.0S 120.0E	21.0S 120.0E	0	LO	250	N	N	19910407	090513	243	281	11	28
98	27	AUSTRALIA-WA	GEORGE RANGE	21.0S 120.2E	21.0S 120.2E	0	LO	250	N	N	19910407	090516	243	281	11	28
98	28	AUSTRALIA-WA	EAST OF GEORGE RANGE	20.7S 119.3E	20.7S 119.3E	5	LO	250	N	N	19910407	090518	243	281	11	28
98	29	AUSTRALIA-WA	EAST OF GEORGE RANGE	20.7S 119.5E	20.7S 119.5E	20	LO	250	N	N	19910407	090521	243	281	11	28
98	30	AUSTRALIA-WA	EAST OF GEORGE RANGE	20.8S 119.7E	20.8S 119.7E	20	LO	250	N	N	19910407	090524	243	281	10	28
98	31	AUSTRALIA-WA	EIGHTY MILE BEACH	21.1S 120.4E	21.1S 120.4E	20	LO	250	N	N	19910407	090536	243	281	10	28
98	32	AUSTRALIA-WA	NW. CORNER GRT. SNDY DEST	21.2S 120.7E	21.2S 120.7E	50	LO	250	N	N	19910407	090541	243	281	9	28
98	33	AUSTRALIA-WA	NW. CORNER GRT. SNDY DEST	22.0S 123.2E	22.0S 123.2E	50	LO	250	N	N	19910407	090622	243	280	7	28
98	34	CARGO BAY	CARGO BAY	25.8S 137.1E	25.8S 137.1E	00	LO	250	N	N	19910407	091001	243	274	-6	28
98	35	CANARY ISLANDS	SANTA CRUZ	28.3N 16.6W	28.3N 16.6W	60	LO	250	N	N	19910407	100605	246	107	41	29
98	36	CANARY ISLANDS	LAS PALMAS	27.9N 15.6W	27.9N 15.6W	60	LO	250	N	N	19910407	100611	246	107	42	29
98	37	CANARY ISLANDS	FUERTEVENTURE	28.5N 14.0W	28.5N 14.0W	90	LO	250	N	N	19910407	100621	246	107	42	29
98	38	WESTERN SAHARA	COAST, SALT FLATS	27.7N 12.8W	27.7N 12.8W	40	LO	250	N	N	19910407	100701	246	109	45	29
98	39	MOROCCO	SW. MOROCCO	27.2N 12.0W	27.2N 12.0W	20	LO	250	N	N	19910407	100715	246	110	46	29
98	40	ALGERIA	IGUIDI DESERT	26.6N 8.2W	26.6N 8.2W	0	LO	250	N	N	19910407	100812	246	112	49	29
98	41	ALGERIA	PLATEAU DU TADEMAIT	24.9N 0.2W	24.9N 0.2W	0	LO	250	N	N	19910407	101014	246	119	57	29
98	42	ALGERIA	PLATEAU DU TADEMAIT	24.4N 1.8E	24.4N 1.8E	0	LO	250	N	N	19910407	101045	246	120	59	29

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		MADIR		CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN	EL	OR
				LAT	LON	LAT	LON												
98	43	ALGERIA	PLATEAU DU TADEMAIT	24.2N	2.2E	24.2N	2.2E	0	LO	250	N	N	19910407	101052	246	121	59	29	
98	44	ALGERIA	TINRHET PLATEAU	24.1N	2.9E	24.1N	2.9E	0	LO	250	N	N	19910407	101102	246	121	60	29	
98	45	ALGERIA	AHAGGAR	23.8N	3.8E	23.8N	3.8E	0	LO	250	N	N	19910407	101116	246	122	61	29	
98	46	ALGERIA	AHAGGAR	23.3N	5.4E	23.3N	5.4E	0	LO	250	N	N	19910407	101143	246	124	63	29	
98	47	NIGER	TENERE DESERT	22.6N	7.9E	22.6N	7.9E	0	LO	250	N	N	19910407	101222	246	127	65	29	
98	48	NIGER	TENERE DESERT	22.5N	8.1E	22.5N	8.1E	0	LO	250	N	N	19910407	101225	246	127	65	29	
98	49	NIGER	TCHIGAI PLATEAU	22.4N	8.4E	22.4N	8.4E	0	LO	250	N	N	19910407	101231	246	127	65	29	
98	50	CHAD	TIBESTI MTNS.,MT. KOUSSI	18.9N	18.6E	19.6N	16.2E	0	LO	250	N	N	19910407	101440	245	139	73	29	
98	51	CHAD	TIBESTI MTNS.,EMI KOUSSI	19.8N	18.5E	19.3N	17.0E	0	LO	250	N	N	19910407	101453	245	141	74	29	
98	52	CHAD	TIBESTI MTNS.,PIC TOUSID	21.0N	16.4E	19.0N	17.9E	0	LO	250	N	N	19910407	101508	245	143	75	29	
98	53	CHAD	SE. OF TIBESTI MTNS.	18.8N	18.2E	18.8N	18.2E	0	LO	250	N	N	19910407	101514	245	144	75	29	
98	54	CHAD	BODELE DESERT	18.5N	19.1E	18.5N	19.1E	0	LO	250	N	N	19910407	101529	245	146	76	29	
98	55	CHAD	ENNEDI PLATEAU	18.3N	19.4E	18.3N	19.4E	0	LO	250	N	N	19910407	101534	245	147	76	29	
98	56	CHAD	ENNEDI PLATEAU	17.8N	20.8E	17.8N	20.8E	0	LO	250	N	N	19910407	101558	245	152	77	29	
98	57	SUDAN	SO. OF AL UBAYYID	12.4N	29.5E	14.4N	28.3E	10	LO	250	N	N	19910407	101809	245	196	82	29	
98	58	SUDAN	SO. OF AL UBAYYID	12.5N	30.4E	14.2N	28.5E	10	LO	250	N	N	19910407	101814	245	199	82	29	
98	59	ETHIOPIA	LAKE TANA	12.0N	37.3E	10.9N	35.0E	60	LO	250	N	N	19910407	102012	244	246	79	29	
98	60	ETHIOPIA	LAKE ABAYA	6.5N	37.9E	10.2N	36.3E	70	LO	250	N	N	19910407	102036	244	253	78	29	
98	61	ETHIOPIA	RIFT VALLEY LAKES	7.6N	38.6E	10.0N	36.9E	60	LO	250	N	N	19910407	102046	244	255	78	29	
98	62	ETHIOPIA	RIFT VALLEY LAKES	8.0N	38.9E	9.9N	37.0E	60	LO	250	N	N	19910407	102049	244	255	78	29	
98	63	ETHIOPIA	DANAKIL DEPRESSION	13.5N	40.8E	8.2N	40.1E	30	LO	250	N	N	19910407	102147	244	265	75	29	
98	64	DJIBOUTI	LAKE ABBE	11.5N	42.2E	8.0N	40.5E	10	LO	250	N	N	19910407	102154	244	266	74	29	
98	65	DJIBOUTI	LAKE ABBE	11.5N	42.2E	7.9N	40.7E	10	LO	250	N	N	19910407	102157	244	266	74	29	
98	66	DJIBOUTI	GULF OF ADEN	11.7N	43.5E	7.8N	40.8E	10	LO	250	N	N	19910407	102200	244	267	74	29	
98	67	SOMALIA		7.2N	41.9E	7.2N	41.9E	60	LO	250	N	N	19910407	102220	244	269	73	29	
98	68	MAURITANIA	ADRAR MTNS.	21.9N	13.6W	21.9N	14.0W	20	LO	250	N	N	19910407	114621	246	128	67	30	
98	69	MAURITANIA	RICHAT STRUCTURE	21.0N	11.2W	21.5N	12.7W	5	LO	250	N	N	19910407	114641	246	130	68	30	
98	70	MAURITANIA	RICHAT STRUCTURE	21.0N	11.8W	21.0N	11.4W	5	LO	250	N	N	19910407	114703	246	131	69	30	
98	71	MAURITANIA	ERG CHECH	22.8N	8.5W	20.3N	9.4W	0	LO	250	N	N	19910407	114736	245	135	71	30	
98	72	MAURITANIA	ERG CHECH	22.5N	8.0W	20.2N	9.2W	0	LO	250	N	N	19910407	114740	245	135	71	30	
98	73	USA-CA	MOJAVE DESERT	27.6N	116.1W	27.6N	116.1W	40	HO	250	N	N	19910407	143936	246	90	14	32	
98	74	USA-CA	SALTON SEA, IMPERIAL VLY	33.2N	115.8W	27.6N	115.7W	5	HO	250	N	N	19910407	143941	246	90	15	32	
98	75		EARTH LIMB	27.8N	114.7W	27.8N	114.7W	HO	250	N	N	19910407	143956	246	90	16	32		
98	76	USA-AZ	COLORADO RIVER	28.1N	111.0W	28.1N	111.0W	0	LO	250	N	N	19910407	144051	246	92	19	32	
98	77	USA-AZ	YUMA, COLORADO RIVER	32.6N	114.7W	28.2N	109.3W	0	LO	250	N	N	19910407	144115	246	93	21	32	
98	78	USA-AZ	YUMA, COLORADO RIVER	32.7N	114.7W	28.3N	108.7W	0	LO	250	N	N	19910407	144125	246	94	21	32	
98	79	USA-AZ		28.4N	105.4W	28.4N	105.4W	0	LO	250	N	N	19910407	144212	246	95	24	32	
98	80	USA-TX	WEST TEXAS	28.5N	104.5W	28.5N	104.5W	50	HO	250	N	N	19910407	144226	246	96	25	32	
98	81		EARTH LIMB	25.8S	41.6E	25.8S	41.6E	HO	250	N	N	19910407	152344	243	275	-4	32		
98	82	MEXICO	CIUDAD OBREGON	27.8N	109.9W	27.4N	108.6W	0	LO	250	N	N	19910407	162041	246	107	43	33	

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		MADIR		CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL
				LAT	LO	LAT	LO										
98	83	USA-AZ	EAST OF TUCSON	32.2N	109.9W	27.2N	107.3W	0	LO	250	N	N	19910407	162100	246	108	44
98	84	USA-TX	WEST TEXAS			27.0N	106.2W	0	LO	250	N	N	19910407	162116	246	109	45
98	85	MEXICO	NW. OF CHIHUAHUA			26.9N	105.6W	0	LO	250	N	N	19910407	162125	246	109	46
98	86	MEXICO	CHIHUAHUA	28.5N	105.6W	26.9N	105.3W	0	LO	250	N	N	19910407	162130	246	110	46
98	87	MEXICO	MONTERREY	25.3N	104.4W	25.8N	99.6W	5	LO	250	N	N	19910407	162256	246	113	52
98	88	BRAZIL	INTERIOR			4.0S	58.1W	90	LO	250	N	N	19910407	181538	243	287	53
98	89	BRAZIL				5.8S	55.0W	90	LO	250	N	N	19910407	181637	243	287	49
98	90	BRAZIL				6.3S	54.2W	90	LO	250	N	N	19910407	181652	243	287	48
98	91	BRAZIL	PANTANAL AREA			16.6S	57.9W	40	LO	250	N	N	19910407	185627	244	286	25
98	92	BRAZIL	PANTANAL AREA			17.1S	56.8W	70	LO	250	N	N	19910407	195646	244	286	24
98	93	BRAZIL	PANTANAL AREA			17.2S	56.4W	80	LO	250	N	N	19910407	195652	244	285	23
98	94	BRAZIL	SE. OF PANTANAL AREA			17.7S	55.4W	40	LO	250	N	N	19910407	195710	244	285	22
98	95	BRAZIL	SE. OF PANTANAL AREA			18.0S	54.6W	60	LO	250	N	N	19910407	195724	244	285	21
98	96		REFLECTIVE PANEL GRO			24.6N	108.6E	LO	250	N	N	N	19910407	222243	245	81	-2
98	97		REFLECTIVE PANEL GRO			24.7N	109.1E	LO	250	N	N	N	19910407	222250	245	81	-2
98	98		REFLECTIVE PANEL GRO			24.8N	109.6E	LO	250	N	N	N	19910407	222259	245	81	-1
98	99		REFLECTIVE PANEL GRO			24.9N	110.1E	LO	250	N	N	N	19910407	222306	245	81	-1
98	100	MALI	NE OF INLAND DELTA			19.7N	6.1W	5	LO	250	N	N	19910408	110945	247	121	67
98	101	MALI	NE OF INLAND DELTA			18.0N	1.8W	0	LO	250	N	N	19910408	111058	247	125	72
98	102	MALI	NE OF INLAND DELTA			18.0N	1.7W	0	LO	250	N	N	19910408	111100	247	125	72
98	103	MALI	NE OF INLAND DELTA			17.9N	1.6W	0	LO	250	N	N	19910408	111102	247	126	72
98	104	MALI	NE OF INLAND DELTA			17.9N	1.4W	0	LO	250	N	N	19910408	111104	247	126	72
98	105	MALI	NE OF INLAND DELTA			17.8N	1.3W	0	LO	250	N	N	19910408	111106	247	126	72
98	106	MALI	NE OF INLAND DELTA			17.7N	1.1W	0	LO	250	N	N	19910408	111109	247	126	72
98	107	MALI	NE OF INLAND DELTA			17.3N	0.2W	0	LO	250	N	N	19910408	111126	247	127	73
98	108	MALI	NE OF INLAND DELTA			17.3N	0.0E	0	LO	250	N	N	19910408	111128	247	127	74
99	1		CARGO BAY, GRO			14.2S	80.1E	0	LO	250	N	N	19910407	103419	243	286	28
99	2		CARGO BAY, GRO			16.3S	84.8E	40	N	Y	19910407	103542	243	285	23		
99	3		CARGO BAY, GRO			16.8S	85.8E	40	N	Y	19910407	103601	243	284	22		
99	4		CARGO BAY, GRO			17.3S	87.0E	40	N	Y	19910407	103621	243	284	21		
99	5		CARGO BAY-DARK			22.4N	91.7W	40	N	N	19910407	112644	245	79	-7		
99	6		CARGO BAY-DARK			22.6N	91.0W	40	N	N	19910407	112656	245	79	-6		
99	7		CARGO BAY-DARK			22.8N	90.3W	40	N	N	19910407	112706	245	80	-5		
99	8		CARGO BAY-DARK			23.5N	88.0W	40	N	N	19910407	112744	245	81	-3		
99	9		CARGO BAY-DARK			23.9N	86.9W	40	N	N	19910407	112801	245	81	-2		
99	10		CARGO BAY-DARK			24.0N	86.4W	40	N	N	19910407	112809	245	81	-1		
99	11		CARGO BAY-DARK			24.3N	85.3W	40	N	N	19910407	112827	245	82	-0		
99	12		CARGO BAY-DARK			24.8N	83.3W	40	N	N	19910407	112858	245	83	1		
99	13		CARGO BAY-DARK			25.0N	82.6W	40	N	N	19910407	112909	245	83	2		
99	14		CARGO BAY-DARK			25.1N	82.0W	40	N	N	19910407	112918	245	83	2		

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	NADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL	OR
99	15		CARGO BAY-DARK		25.5N 80.2W	40	N	N	N	N	19910407	112945	245	84	4	30
99	16		CARGO BAY-GRO		25.8N 79.0W	40	N	N	N	N	19910407	113004	246	85	5	30
99	17		CARGO BAY-GRO		25.9N 78.7W	40	N	N	N	N	19910407	113008	246	85	5	30
99	18		CARGO BAY-DARK		26.0N 78.1W	40	N	N	N	N	19910407	113017	246	85	6	30
99	19		CARGO BAY-GRO		26.7N 74.3W	40	N	N	N	N	19910407	113116	246	87	10	30
99	20		CARGO BAY-GRO		26.9N 73.3W	40	N	N	N	N	19910407	113130	246	87	10	30
99	21		CARGO BAY-GRO		27.7N 39.5W	40	N	N	N	N	19910407	113946	246	107	42	30
99	22		CARGO BAY-GRO		27.6N 38.9W	40	N	N	N	N	19910407	113956	246	107	43	30
99	23		CARGO BAY-GRO		26.9N 34.0W	40	N	N	N	N	19910407	114109	246	111	47	30
99	24		CARGO BAY-GRO		24.2N 21.3W	40	N	N	N	N	19910407	114423	246	120	59	30
99	25		CARGO BAY-GRO		23.9N 20.5W	40	N	N	N	N	19910407	114436	246	121	60	30
99	26		CARGO BAY-GRO		23.8N 20.1W	40	N	N	N	N	19910407	114442	246	121	60	30
99	27	CANARY ISLANDS	CLOUD WAKES	27.0N 17.0W	23.4N 18.6W	70	NV				19910407	114507	246	123	62	30
99	28	MAURITANIA	RICHAT STRUCTURE	21.0N 11.5W	20.7N 10.6W	0	LO				19910407	114717	245	133	70	30
99	29		CARGO BAY-GRO DEPLOY		17.1S 62.6E	40	N	N	N	N	19910407	120938	243	284	22	30
99	30		CARGO BAY-GRO DEPLOY		18.2S 65.3E	40	N	N	N	N	19910407	121024	243	284	19	30
99	31		CARGO BAY-GRO DEPLOY		18.5S 65.9E	40	N	N	N	N	19910407	121035	243	284	18	30
99	32		CARGO BAY-GRO DEPLOY		21.1S 72.8E	40	N	N	N	N	19910407	121231	243	281	11	30
99	33		CARGO BAY-GRO DEPLOY		21.4S 73.6E	40	N	N	N	N	19910407	121243	243	281	10	30
99	34		GRO DEPLOY		27.7N 91.8W	40	N	N	N	N	19910407	130617	246	90	15	31
99	35		GRO DEPLOY		27.9N 89.6W	40	N	N	N	N	19910407	130649	246	91	17	31
99	36		GRO DEPLOY		28.0N 89.0W	40	N	N	N	N	19910407	130658	246	91	18	31
99	37		GRO DEPLOY		28.1N 87.8W	40	N	N	N	N	19910407	130715	246	92	19	31
99	38		GRO DEPLOY		28.4N 82.2W	40	N	N	N	N	19910407	130837	246	95	24	31
99	39	USA-FL	GRO DEPLOY DK/SO, FLORIDA	28.5N 81.0W	28.5N 79.9W	60	LO				19910407	130911	246	97	26	31
99	40	USA-FL	GRO DEPLOY DK/SO, FLORIDA	28.5N 81.0W	28.5N 79.5W	60	LO				19910407	130916	246	97	27	31
99	41	USA-FL	GRO DEPLOY DK/SO, FLORIDA	28.5N 81.0W	28.5N 79.1W	60	LO				19910407	130922	246	97	27	31
99	42	USA-FL	GRO DEPLOY DK/SO, FLORIDA	28.5N 81.0W	28.5N 78.8W	60	LO				19910407	130927	246	97	27	31
99	43	USA-FL	GRO DEPLOY DK/SO, FLORIDA	28.5N 81.0W	28.5N 78.4W	60	LO				19910407	130932	246	97	28	31
99	44	USA-FL	GRO DEPLOY DK/SO, FLORIDA	28.5N 80.0W	28.5N 78.0W	50	LO				19910407	130938	246	98	28	31
99	45	USA-FL	GRO DEPLOY DK/SO, FLORIDA	28.5N 79.0W	28.5N 77.4W	50	LO				19910407	130947	246	98	28	31
99	46	USA-FL	GRO DEPLOY DK/SO, FLORIDA	28.5N 79.0W	28.5N 76.4W	60	HO				19910407	131002	246	99	29	31
99	47	BAHAMAS	WESTERN END BAHAMAS	27.5N 77.0W	28.5N 74.5W	30	HO				19910407	131030	246	100	31	31
99	48	BAHAMAS	WESTERN END BAHAMAS	27.5N 77.0W	28.5N 73.6W	30	HO				19910407	131042	246	100	32	31
99	49		GRO DEPLOYMENT		17.0N 25.2W	40	N	N	N	N	19910407	132321	245	154	78	31
99	50		GRO DEPLOYMENT		16.5N 24.2W	40	N	N	N	N	19910407	132338	245	158	79	31
99	51		GRO DEPLOYMENT		16.3N 23.7W	40	N	N	N	N	19910407	132347	245	160	79	31
99	52		GRO DEPLOYMENT		15.8N 22.5W	40	N	N	N	N	19910407	132408	245	167	80	31
99	53		GRO DEPLOYMENT		14.0N 18.8W	40	N	N	N	N	19910407	132513	244	194	82	31
99	54		GRO DEPLOYMENT		13.3N 17.3W	40	N	N	N	N	19910407	132540	244	207	82	31



TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	NADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
99	55		GRO DEPLOYMENT	12.8N 16.4W	12.8N 16.4W			40	N	N	19910407	132557	244	216	82	31
99	56		GRO DEPLOYMENT	12.6N 16.0W	12.6N 16.0W			40	N	N	19910407	132805	244	220	82	31
99	57		GRO DEPLOYMENT	11.6N 13.9W	11.6N 13.9W			40	N	N	19910407	132842	244	236	81	31
99	58		GRO DEPLOYMENT	11.4N 13.5W	11.4N 13.5W			40	N	N	19910407	132848	244	238	81	31
99	59		GRO DEPLOYMENT	11.2N 13.2W	11.2N 13.2W			40	N	N	19910407	132855	244	240	81	31
99	60		GRO DEPLOYMENT	11.0N 12.8W	11.0N 12.8W			40	N	N	19910407	132702	244	243	80	31
99	61		GRO DEPLOYMENT	9.7N 10.4W	9.7N 10.4W			40	N	N	19910407	132748	244	255	78	31
99	62		GRO DEPLOYMENT	8.7N 8.8W	8.7N 8.8W			40	N	N	19910407	132821	244	262	77	31
99	63		GRO DEPLOYMENT	8.3S 21.1E	8.3S 21.1E			40	N	N	19910407	133745	243	287	42	31
99	64		GRO DEPLOYMENT	9.0S 22.3E	9.0S 22.3E			40	N	N	19910407	133808	243	287	41	31
99	65		GRO DEPLOYMENT	11.5S 27.0E	11.5S 27.0E			40	N	N	19910407	133934	243	287	35	31
99	66		GRO DEPLOYMENT	12.0S 28.0E	12.0S 28.0E			40	N	N	19910407	133953	243	287	34	31
99	67		GRO DEPLOYMENT	12.3S 28.6E	12.3S 28.6E			40	N	N	19910407	134004	243	286	33	31
99	68		GRO DEPLOYMENT	12.7S 29.4E	12.7S 29.4E			40	N	N	19910407	134018	243	286	33	31
99	69		GRO DEPLOYMENT	13.1S 30.1E	13.1S 30.1E			40	N	N	19910407	134031	243	286	32	31
99	70		GRO DEPLOYMENT	22.4S 52.8E	22.4S 52.8E			40	N	N	19910407	134700	243	280	7	31
99	71		GRO DEPLOYMENT	22.7S 53.8E	22.7S 53.8E			40	N	N	19910407	134716	243	280	6	31
99	72		GRO DEPLOYMENT	23.4S 55.9E	23.4S 55.9E			40	N	N	19910407	134748	243	279	4	31
99	73		GRO DEPLOYMENT	23.8S 57.4E	23.8S 57.4E			40	N	N	19910407	134813	243	278	2	31
99	74		GRO DEPLOYMENT	24.2S 59.0E	24.2S 59.0E			40	N	N	19910407	134838	243	278	1	31
99	75	USA	GRO DEPLOY - SW USA	27.5N 116.9W	27.5N 116.9W	20	HO	40	N	N	19910407	143924	246	89	14	32
99	76	USA	GRO DEPLOY - SW USA	27.6N 115.9W	27.6N 115.9W	20	HO	40	N	N	19910407	143938	246	90	14	32
99	77	USA	GRO DEPLOY - SW USA	27.7N 115.1W	27.7N 115.1W	20	HO	40	N	N	19910407	143951	246	90	15	32
99	78	USA	GRO DEPLOY - SO. CA COAST	28.0N 112.8W	28.0N 112.8W	40	HO	40	N	N	19910407	144024	246	91	17	32
99	79	USA	GRO DEPLOY - SO. CA/MEX	28.1N 111.3W	28.1N 111.3W	40	HO	40	N	N	19910407	144046	246	92	19	32
99	80	MEXICO	GRO DEPLOY - SO. CA/MEX	28.2N 110.1W	28.2N 110.1W	30	HO	40	N	N	19910407	144104	246	93	20	32
99	81	MEXICO	GRO DEPLOY - SO. CA/MEX	28.3N 108.2W	28.3N 108.2W	20	HO	40	N	N	19910407	144117	246	93	21	32
99	82	MEXICO	GRO DEPLOY - SO. CA/MEX	28.3N 108.0W	28.3N 108.0W	10	HO	40	N	N	19910407	144135	246	94	22	32
99	83	MEXICO	GRO DEPLOY - MEX	28.5N 103.6W	28.5N 103.6W	10	HO	40	N	N	19910407	144239	246	96	26	32
99	84	MEXICO	GRO DEPLOY - MEX	28.5N 101.9W	28.5N 101.9W	10	HO	40	N	N	19910407	144303	246	97	27	32
99	85		GRO DEPLOY	28.3N 94.9W	28.3N 94.9W	HO		40	N	N	19910407	144446	246	101	34	32
99	86		GRO DEPLOY	28.3N 94.2W	28.3N 94.2W	HO		40	N	N	19910407	144456	246	102	35	32
99	87		GRO DEPLOY	27.3N 84.1W	27.3N 84.1W	HO		40	N	N	19910407	144725	246	108	44	32
99	88	USA	GRO DEPLOY, SW USA/NW MX	28.3N 118.3W	28.3N 118.3W	10	HO	40	N	N	19910407	161818	246	101	34	33
99	89	USA	GRO DEPLOY, SW USA/NW MX	28.3N 117.9W	28.3N 117.9W	10	HO	40	N	N	19910407	161824	246	102	34	33
99	90		GRO DEPLOY	27.8N 112.1W	27.8N 112.1W			40	N	N	19910407	161948	246	105	40	33
99	91		GRO DEPLOY	27.7N 111.2W	27.7N 111.2W			40	N	N	19910407	162002	246	106	41	33
99	92		GRO DEPLOY	21.1N 131.0W	21.1N 131.0W			40	N	N	19910407	193408	245	126	67	35
99	93		GRO DEPLOY	20.6N 129.7W	20.6N 129.7W			40	N	N	19910407	193429	245	128	68	35
99	94		GRO DEPLOY	20.5N 129.3W	20.5N 129.3W			40	N	N	19910407	193435	245	128	69	35

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL	OR
99	95		GRO DEPLOY		20.4N 129.2W	40	N	19910407	193438	245	128	69	35			
99	96		GRO DEPLOY		20.3N 128.7W	40	N	19910407	193445	245	129	69	35			
99	97		GRO DEPLOY		20.2N 128.6W	40	N	19910407	193448	245	129	69	35			
99	98		GRO DEPLOY		20.1N 128.3W	40	N	19910407	193452	245	129	70	35			
99	99		GRO DEPLOY		18.4N 123.8W	40	N	19910407	193608	245	137	74	35			
99	100		GRO DEPLOY		18.2N 123.5W	40	N	19910407	193613	245	137	74	35			
99	101		GRO DEPLOY		18.2N 123.4W	40	N	19910407	193616	245	138	75	35			
99	102		GRO DEPLOY		17.9N 122.7W	40	N	19910407	193628	245	139	75	35			
99	103		GRO DEPLOY		27.8N 149.8E	40	N	19910407	205339	246	89	14	36			
99	104		GRO DEPLOY		27.8N 150.6E	40	N	19910407	205350	246	90	15	36			
99	105		GRO DEPLOY		27.9N 151.1E	40	N	19910407	205358	246	90	15	36			
99	106		GRO DEPLOY		28.1N 153.2E	40	N	19910407	205429	246	91	17	36			
99	107		GRO DEPLOY		28.1N 153.5E	40	N	19910407	205433	246	91	17	36			
151	1	PACIFIC OCEAN	SUNGLINT-OCEAN EDDIES		21.7N 112.6W	0	LO	250	N	19910405	191710	245	165	73	4	
151	1	A	SAN BENEDICTO I.-SUNGLIN		20.6N 109.5E	5	LO	250	N	19910405	191802	245	177	75	4	
151	2	MEXICO	SOCORRO, SAN BENEDICTO I.	19.0N 111.0W	20.0N 108.0W	10	LO	250	N	19910405	191827	245	183	76	4	
151	3	MEXICO	PUNTA MITA, BANDERAS BAY	20.5N 105.5W	19.2N 105.8W	45	LO	250	N	19910405	191903	245	193	76	4	
151	4	MEXICO	SAN BLAS, COASTLINE	21.5N 105.0W	18.9N 105.3W	15	LO	250	N	19910405	191913	244	196	76	4	
151	5	MEXICO	SIERRA MADRE OCCIDENTAL	21.0N 103.5W	18.8N 104.9W	20	LO	250	N	19910405	191919	244	198	76	4	
151	6	MEXICO	INFIERNILLO RESERVOIR	18.5N 102.5W	18.4N 103.8W	20	LO	250	N	19910405	191937	244	203	76	4	
151	7	MEXICO	SIERRA MADRE DEL SUR	17.0N 99.0W	17.8N 102.5W	10	LO	250	N	19910405	192000	244	210	76	4	
151	8	MEXICO	DULCE BAY	16.5N 99.0W	17.5N 101.8W	15	LO	250	N	19910405	192013	244	213	76	4	
151	9	MEXICO	POPOCATEPETL VOLCANO	18.5N 98.5W	16.6N 99.7W	15	LO	250	N	19910405	192048	244	223	75	4	
151	10	MEXICO	SIERRA DEL SUR-FIRES	17.0N 100.0W	16.4N 99.3W	10	NV	250	N	19910405	192056	244	225	75	4	
151	11	MEXICO	GULF OF TEHUANTEPEC	16.0N 95.0W	15.0N 96.3W	25	LO	250	N	19910405	192149	244	237	74	4	
151	12	MEXICO	SIERRA DE SOCONUSCO	15.5N 92.0W	13.5N 93.3W	40	LO	250	N	19910405	192243	244	247	71	4	
151	13	EL SALVADOR	SAN SALVADOR	13.5N 89.0W	12.2N 90.7W	45	LO	250	N	19910405	192330	244	253	69	4	
151	14	HONDURAS	GULF OF FONESCA	13.0N 87.5W	11.6N 89.4W	20	LO	250	N	19910405	192353	243	256	68	4	
151	15	NICARAGUA	LAGO DE NICARAGUA	11.5N 86.0W	11.3N 88.8W	25	LO	250	N	19910405	192404	243	258	68	4	
151	16	NICARAGUA	LAGO DE NICARAGUA	11.5N 86.0W	10.8N 88.0W	25	LO	250	N	19910405	192419	243	259	67	4	
151	17	NICARAGUA	SANTA ELENA BAY	11.0N 86.0W	10.7N 87.7W	20	LO	250	N	19910405	192424	243	260	67	4	
151	18	COSTA RICA	PACIFIC COAST	10.0N 86.0W	10.6N 87.5W	15	LO	250	N	19910405	192428	243	260	66	4	
151	19	COSTA RICA	GULF OF NICOYA	10.5N 85.0W	10.4N 87.2W	25	LO	250	N	19910405	192434	243	261	66	4	
151	20	COSTA RICA	LAGO DE NICARAGUA	11.0N 85.0W	10.1N 86.7W	35	LO	250	N	19910405	192444	243	262	66	4	
151	21	NICARAGUA	PACIFIC COAST	11.0N 86.0W	9.2N 85.0W	15	LO	250	N	19910405	192514	243	264	64	4	
151	22	COSTA RICA	SUNGLINT-GULF OF NICOYA	9.0N 84.5W	8.8N 84.2W	35	NV	250	N	19910405	192530	243	265	63	4	
151	23	COSTA RICA	PENINSULA DE OSA	8.5N 83.5W	8.7N 84.0W	35	NV	250	N	19910405	192534	243	266	63	4	
151	24	COSTA RICA	PUNTA BURICA	8.5N 83.0W	8.5N 83.6W	25	NV	250	N	19910405	192540	243	266	63	4	
151	25	PANAMA	LAGUNA DE CHIRQUI	9.0N 82.5W	8.3N 83.4W	30	NV	250	N	19910405	192545	243	267	62	4	
151	26	PANAMA	GULF OF CHIRQUI	8.0N 82.0W	8.2N 83.1W	30	LO	250	N	19910405	192551	243	267	62	4	

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	LONG	NADIR LAT	LONG	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
151	27	PACIFIC OCEAN	SUNGLINT-WAVES, SHIPWAKES	7.5N	82.5W	6.9N	80.8W	10	LO	250	N	Y	19910405	192633	243	270	60	4
151	28	COLOMBIA	MEDELLIN	6.5N	76.0W	4.9N	77.3W	80	LO	250	N	N	19910405	192739	243	273	56	4
151	29	COLOMBIA	BOGOTA	4.5N	74.5W	4.2N	76.1W	80	LO	250	N	Y	19910405	192803	243	274	54	4
151	30	COLOMBIA	CORDILLERA ORIENTAL	3.5N	74.0W	3.9N	75.6W	55	LO	250	N	Y	19910405	192813	243	274	54	4
151	31	COLOMBIA	CORDILLERA ORIENTAL	4.0N	73.5W	3.5N	74.9W	50	LO	250	N	Y	19910405	192826	243	275	53	4
151	32	COLOMBIA	SERRANIA DE LA MACARENA	3.0N	74.0W	3.3N	74.6W	55	NV	250	N	Y	19910405	192832	243	275	53	4
151	33	COLOMBIA	RIO GUAYABERO	2.5N	73.5W	2.4N	72.9W	55	NV	250	N	Y	19910405	192903	243	276	51	4
151	34	COLOMBIA	RIO CAQUETA	0.0	72.0W	0.9N	70.3W	80	LO	250	N	Y	19910405	192953	243	278	48	4
151	35	COLOMBIA	RIO CAQUETA, RIO APAPORI	1.0S	70.5W	0.4N	69.5W	90	LO	250	N	Y	19910405	193008	243	278	47	4
151	36	BRAZIL	RIO NEGRO	0.0	67.0W	0.6S	67.9W	50	NV	250	N	Y	19910405	193039	243	279	45	4
151	37	BRAZIL	RIO NEGRO	0.5S	66.5W	0.7S	67.7W	55	LO	250	N	Y	19910405	193044	243	279	45	4
151	38	BRAZIL	AMAZON RIVER	2.5S	66.5W	1.0S	67.1W	60	LO	250	N	N	19910405	193055	243	279	44	4
151	39	BRAZIL	AMAZON RIVER	2.5S	65.0W	1.8S	65.8W	70	LO	250	N	Y	19910405	193120	243	280	43	4
151	40	BRAZIL	AMAZON RIVER	3.5S	65.0W	1.9S	65.6W	70	LO	250	N	Y	19910405	193124	243	280	42	4
151	41	BRAZIL	AMAZON RIVER	3.5S	64.5W	2.1S	65.3W	70	LO	250	N	Y	19910405	193129	243	280	42	4
151	42	BRAZIL	RIO NEGRO, RIO JAPURA	1.0S	66.0W	2.5S	64.6W	70	LO	250	N	N	19910405	193142	242	280	41	4
151	43	BRAZIL	AMAZON RIVER	3.5S	64.0W	2.9S	63.9W	65	NV	250	N	Y	19910405	193156	242	280	40	4
151	44	BRAZIL	AMAZON RIVER	3.5S	64.0W	3.5S	62.8W	65	LO	250	N	Y	19910405	193216	242	280	39	4
151	45	BRAZIL	RIO MADEIRA	4.5S	60.5W	5.1S	60.1W	70	NV	250	N	N	19910405	193309	242	281	36	4
151	46	BRAZIL	RIO ARIQUANA, ROAD	7.5S	61.0W	5.9S	58.7W	70	LO	250	N	N	19910405	193334	242	281	34	4
151	47	BRAZIL	RIVER, AGRICULTURE			7.7S	55.5W	55	LO	250	N	N	19910405	193436	242	281	31	4
151	48	BRAZIL	RIO PEIXOTO DE AZEVEDO	10.0S	55.0W	8.3S	54.4W	50	LO	250	N	Y	19910405	193455	242	281	29	4
151	49	BRAZIL	SERRA DO CACHIMBO	10.0S	54.0W	8.5S	54.1W	50	LO	250	N	Y	19910405	193502	242	281	29	4
151	50	BRAZIL	RIO XINGU, AGRICULTURE	10.5S	53.0W	9.0S	53.1W	40	LO	250	N	Y	19910405	193520	242	281	28	4
151	51	BRAZIL	RIO XINGU, AGRICULTURE	10.0S	52.5W	9.1S	52.9W	50	NV	250	N	Y	19910405	193523	242	281	28	4
151	52	BRAZIL	RIO XINGU	9.0S	52.0W	9.2S	52.7W	30	NV	250	N	Y	19910405	193528	242	281	27	4
151	53	BRAZIL	RIO XINGU	9.0S	53.0W	9.3S	52.5W	30	NV	250	N	Y	19910405	193531	242	281	27	4
151	54	BRAZIL	RIVER, AGRICULTURE	8.0S	51.5W	9.6S	52.0W	35	LO	250	N	Y	19910405	193541	242	281	27	4
151	55	BRAZIL	AGRICULTURE	10.0S	51.5W	9.7S	51.8W	20	NV	250	N	Y	19910405	193545	242	281	26	4
151	56	BRAZIL	AGRICULTURE, RIO TAPIRAPE	10.5S	51.0W	9.9S	51.5W	15	NV	250	N	Y	19910405	193549	242	281	26	4
151	57	BRAZIL	RIO ARAGUAIA	11.5S	51.0W	10.0S	51.2W	15	LO	250	N	Y	19910405	193555	242	281	26	4
151	58	BRAZIL	RIO ARAGUAIA	10.0S	50.0W	10.5S	50.3W	15	NV	250	N	N	19910405	193612	242	281	25	4
151	59	BRAZIL	RIO ARAGUAIA	10.0S	50.0W	10.6S	50.1W	15	NV	250	N	Y	19910405	193616	242	281	24	4
151	60	BRAZIL	RIO LEVER, RIO ARAGUAIA	10.5S	50.0W	10.7S	49.9W	20	NV	250	N	Y	19910405	193619	242	281	24	4
151	61	BRAZIL	RIO ARAGUAIA	11.5S	50.0W	10.9S	49.7W	20	NV	250	N	Y	19910405	193624	242	281	24	4
151	62	BRAZIL	RIO ARAGUAIA	12.5S	50.0W	11.2S	49.1W	20	LO	250	N	Y	19910405	193635	242	281	23	4
151	63	BRAZIL	RIO TOCANTINS	12.0S	49.0W	11.3S	48.9W	20	NV	250	N	Y	19910405	193638	242	281	23	4
151	64	BRAZIL	RIO TOCANTINS	11.5S	48.5W	11.4S	48.7W	15	NV	250	N	Y	19910405	193642	242	281	23	4
151	65	BRAZIL	RIO TOCANTINS	10.5S	48.0W	11.5S	48.4W	15	LO	250	N	Y	19910405	193647	242	281	22	4
151	66	BRAZIL	RIO TOCANTINS	13.0S	48.5W	11.7S	48.1W	20	LO	250	N	Y	19910405	193653	242	281	22	4

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	CENTER LON	MADIR LAT	MADIR LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
151	67	BRAZIL	RIO TOCANTINS	12.5S	48.0W	11.8S	47.9W	10	NV	250	N	Y	19910405	193657	243	281	22	4
151	68	BRAZIL	HILLS, RIO TOCANTINS	12.0S	47.5W	11.9S	47.6W	15	NV	250	N	Y	19910405	193701	243	281	22	4
151	69	BRAZIL	HILLS, SERRA NEGRA	11.0S	47.0W	12.1S	47.4W	20	LO	250	N	Y	19910405	193706	243	281	21	4
151	70	BRAZIL	TOCANTINS R.-GERAL DO PA	14.5S	48.0W	12.4S	46.8W	20	LO	250	N	Y	19910405	193717	243	281	21	4
151	71	BRAZIL	PARANA R.GERAL DO PARANA	14.0S	47.0W	12.5S	46.5W	20	LO	250	N	Y	19910405	193721	243	281	20	4
151	72	BRAZIL	PARANA R.GERAL DO PARANA	13.5S	47.0W	12.6S	46.4W	20	NV	250	N	Y	19910405	193724	243	281	20	4
151	73	BRAZIL	ESPIGAO RIDGE, ESPRAIAD S	12.5S	46.5W	12.7S	46.1W	30	NV	250	N	Y	19910405	193729	243	281	20	4
151	74	BRAZIL	ESPIGAO RIDGE	11.5S	46.5W	12.9S	45.8W	40	LO	250	N	Y	19910405	193735	243	281	19	4
151	75	BRAZIL	PARANA R.-ESPIGAO RIDGE	15.0S	46.5W	13.5S	44.5W	30	LO	250	N	Y	19910405	193757	243	281	18	4
151	76	BRAZIL	AGRICULTURE-SMOKE	14.0S	45.5W	13.6S	44.4W	25	LO	250	N	Y	19910405	193800	243	281	18	4
151	77	BRAZIL	RIO SAO FRANCISCO-SMOKE?	15.0S	45.0W	13.7S	44.0W	20	LO	250	N	Y	19910405	193806	243	281	18	4
151	78	BRAZIL	RIO SAO FRANCISCO-SMOKE?	14.5S	44.5W	13.8S	43.9W	20	NV	250	N	Y	19910405	193809	243	281	17	4
151	79	BRAZIL	SAO FRANCISCO R. AGRICUL	14.0S	44.0W	13.9S	43.7W	15	NV	250	N	Y	19910405	193812	243	281	17	4
151	80	BRAZIL	SAO FRANCISCO R. AGRICUL	13.0S	44.0W	14.0S	43.5W	15	NV	250	N	Y	19910405	193815	243	281	17	4
151	81	BRAZIL	SAO FRANCISCO R. AGRICUL	12.0S	44.0W	14.1S	43.2W	20	LO	250	N	Y	19910405	193821	243	281	17	4
151	82	BRAZIL	SAO FRANCISCO R.-HILLS	12.5S	43.0W	14.2S	43.0W	20	LO	250	N	Y	19910405	193825	243	281	16	4
151	83	BRAZIL	CAETITE-HILLS	13.5S	43.0W	14.3S	42.8W	15	NV	250	N	Y	19910405	193829	243	280	16	4
151	84	BRAZIL	CAETITE-HILLS	14.5S	42.5W	14.5S	42.5W	15	NV	250	N	Y	19910405	193834	243	280	16	4
151	85	BRAZIL	HILLS, RIVERS, JEQUEIE	13.5S	40.5W	15.0S	41.3W	25	LO	250	N	Y	19910405	193855	243	280	14	4
151	86	BRAZIL	POCOES, HILLS	14.5S	40.5W	15.1S	41.1W	30	LO	250	N	Y	19910405	193858	243	280	14	4
151	87	BRAZIL	JEQUEIE, COASTLINE	14.0S	39.5W	15.3S	40.7W	40	LO	250	N	Y	19910405	193905	243	280	14	4
151	88	BRAZIL	MACEIO, NE COAST BRAZIL	9.5S	35.5W	16.2S	38.8W	25	HO	250	N	Y	19910405	193940	243	280	12	4
151	89	ATLANTIC OCEAN	CLOUDS			16.5S	38.2W	95	LO	250	N	Y	19910405	193950	243	280	11	4
151	90	BRAZIL	COAST, RIO DOCE	19.0S	39.0W	17.1S	36.7W	60	LO	250	N	Y	19910405	194016	243	279	9	4
151	91	PACIFIC OCEAN ISLAND	JOHNSTON ATOLL	16.0N	169.5W	16.5N	171.2W	25	LO	250	N	Y	19910406	000110	244	219	76	7
151	91 A	PACIFIC OCEAN ISLAND	JOHNSTON ATOLL	16.0N	169.5W	16.4N	170.8W	25	LO	250	N	Y	19910406	000118	244	221	76	7
151	91 B	AFRICA	EGYPT-SUDAN, VERY DARK			22.7N	26.5E	0	LO	250	U	N	19910406	041815	245	84	2	10
151	91 C	EGYPT	SOMALIA JET STREAM-NILE			24.5N	32.7E	90	LO	250	N	Y	19910406	041954	246	87	9	10
151	91 D	RED SEA	SAUDI ARABIA COAST	26.0N	36.0E	25.2N	35.6E	90	NV	250	N	Y	19910406	042038	246	88	11	10
151	92	SAUDI ARABIA	COAST-JIDDAH	22.0N	39.0E	25.9N	39.0E	60	HO	250	N	Y	19910406	042129	246	90	14	10
151	93	SAUDI ARABIA	MAZHUR IRRIGATION PROJEC	26.0N	44.0E	26.7N	42.9E	50	LO	250	N	Y	19910406	042228	246	92	18	10
151	94	SAUDI ARABIA	ZAWAR POINT-COAST	28.0N	49.5E	27.7N	49.7E	60	NV	250	N	Y	19910406	042409	246	96	24	10
151	95	SAUDI ARABIA	ABU ALI ISLAND	27.0N	50.0E	27.8N	50.4E	60	NV	250	N	Y	19910406	042420	246	96	25	10
151	96	IRAN	ZAGROS MNTS., QESHM	28.0N	56.0E	28.2N	55.7E	20	NV	250	N	Y	19910406	042533	246	99	30	10
151	97	PAKISTAN	INDUS RIVER	27.0N	68.0E	28.4N	68.5E	35	LO	250	N	Y	19910406	042845	246	108	42	10
151	98	INDIA	GULF OF KUTCH	22.0N	69.0E	28.2N	72.4E	20	HO	250	N	Y	19910406	042942	246	111	45	10
151	99	INDIA	PANJAL RANGE, RAVI R.	32.5N	76.0E	27.8N	76.7E	15	LO	250	N	Y	19910406	043045	246	115	49	10
151	100	INDIA	GREAT HIMALAYA RANGE	29.0N	80.0E	27.6N	79.0E	20	LO	250	N	Y	19910406	043119	246	117	51	10
151	101	INDIA	RAPTI R.-GREAT HIMALAYA	27.5N	82.5E	27.1N	82.0E	30	NV	250	N	Y	19910406	043204	246	119	54	10
151	102	CHINA	MEKONG RIVER	22.0N	101.0E	22.9N	100.4E	35	LO	250	N	Y	19910406	043647	245	145	70	10

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	NADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL	OR
151	103	LAOS	MEKONG RIVER	20.0N 101.5E	22.3N 102.5E	10	LO	250	N	N	19910406	043721	245	150	71	10
151	104	CHINA	HAI-NAN TAO	19.5N 110.0E	19.8N 109.4E	70	NV	250	N	Y	19910406	043916	245	173	76	10
151	105	CHINA	LUICHOW PENINSULA	21.0N 110.0E	19.5N 110.1E	60	LO	250	N	Y	19910406	043927	245	176	76	10
151	106	VIETNAM	SOUTHERN PART		18.8N 111.8E	45	HO	250	N	Y	19910406	043957	245	185	77	10
151	107	VIETNAM	SOUTHERN PART		18.4N 112.9E	45	LO	250	N	Y	19910406	044015	245	190	77	10
151	108	PHILIPPINES	LUZON-LINGAYEN GULF	16.0N 120.0E	15.4N 119.7E	25	NV	250	N	Y	19910406	044213	244	226	76	10
151	109	PHILIPPINES	LUZON-SUNGLINT	15.0N 120.0E	15.2N 119.9E	20	NV	250	N	Y	19910406	044218	244	227	76	10
151	110	PHILIPPINES	LUZON-SHIP WAKES	15.0N 120.0E	14.9N 120.6E	25	NV	250	N	Y	19910406	044230	244	231	76	10
151	111	PHILIPPINES	LUZON-CABALETE ISLAND	14.0N 122.0E	14.4N 121.8E	40	NV	250	N	Y	19910406	044251	244	236	75	10
151	112	PHILIPPINES	LUZON-RAGAY GULF-SUNGLIN	13.5N 123.0E	13.5N 123.5E	25	NV	250	N	Y	19910406	044321	244	242	74	10
151	113	PHILIPPINES	LUZON-MANILLA BAY	14.5N 121.0E	12.6N 125.4E	25	LO	250	N	N	19910406	044356	244	249	73	10
151	114	PHILIPPINES	SAMAR	12.0N 125.0E	10.9N 128.6E	20	LO	250	N	N	19910406	044454	244	257	70	10
151	115	CAROLINE ISLANDS	PALAU ISLANDS	7.5N 134.0E	7.9N 134.2E	30	NV	250	N	N	19910406	044639	243	267	64	10
151	116	CAROLINE ISLANDS	NGULU ATOLL	7.5N 138.0E	5.3N 138.8E	70	LO	250	N	N	19910406	044806	243	273	60	10
151	117	LIBYA	EL MARZUCHIA SAND DUNES	26.5N 15.5E	26.1N 15.7E	0	NV	250	N	N	19910406	055504	246	90	15	11
151	118	LIBYA	PIVOT IRRIGATION	27.5N 21.5E	26.6N 18.8E	0	LO	250	N	Y	19910406	055551	246	91	18	11
151	119	LIBYA	PIVOT IRRIGATION	27.0N 23.0E	27.1N 21.8E	0	LO	250	N	Y	19910406	055636	246	93	20	11
151	120	EGYPT	MILE RIVER DELTA	31.0N 30.5E	27.9N 27.5E	10	LO	250	N	Y	19910406	055801	246	96	26	11
151	121	EGYPT	MILE RIVER DELTA	31.0N 31.0E	27.9N 28.3E	15	LO	250	N	Y	19910406	055812	246	97	26	11
151	122	EGYPT	MILE RIVER DELTA	31.0N 32.0E	28.2N 31.5E	10	LO	250	N	Y	19910406	055859	246	98	29	11
151	123	EGYPT	SINAI PENINSULA	28.5N 33.5E	28.3N 32.7E	0	NV	250	N	N	19910406	055917	246	100	30	11
151	124	ISRAEL	DEAD SEA	31.0N 35.0E	28.4N 35.4E	10	LO	250	N	Y	19910406	055956	246	101	33	11
151	124	A ISRAEL	DEAD SEA	30.0N 35.0E	28.5N 36.3E	10	LO	250	N	Y	19910406	060010	246	102	34	11
151	125	SAUDI ARABIA	HAIL-PIVOT IRR-JABAL AJA	27.0N 41.0E	28.5N 42.6E	20	LO	250	N	N	19910406	060141	246	106	39	11
151	126	SAUDI ARABIA	LAKE-DUNES-CLOUDS		28.5N 43.8E	50	LO	250	N	N	19910406	060158	246	107	40	11
151	126	SAUDI ARABIA	PERSIAN GULF COAST-SUNGL	27.5N 49.0E	28.4N 45.8E	30	LO	250	N	N	19910406	060230	246	109	42	11
151	127	KUWAIT	BUBYAN ISLAND	29.5N 48.0E	28.3N 47.6E	90	LO	250	N	N	19910406	060254	246	110	44	11
151	128	PERSIAN GULF	SUNGLINT-OIL-SHIP WAKES	27.0N 52.0E	28.1N 49.9E	30	LO	250	N	N	19910406	060328	246	112	46	11
151	129	SAUDI ARABIA	ABU ALI ISLAND-COAST	28.0N 49.0E	28.0N 51.5E	40	LO	250	N	N	19910406	060352	246	113	47	11
151	130	IRAN	QESHM-SUNGLINT	27.0N 55.0E	27.7N 53.9E	5	NV	250	N	Y	19910406	060426	246	115	49	11
151	131	OMAN	MUSANDAM PENINSULA	26.5N 56.5E	27.5N 55.4E	5	NV	250	N	Y	19910406	060449	246	116	51	11
151	132	INDIA	KUTCH PENINSULA	23.0N 69.5E	24.4N 71.5E	30	LO	250	N	N	19910406	060854	246	135	65	11
151	133	INDIA	UKAL RESERVOIR-NARMADA R	21.5N 74.0E	23.0N 76.3E	35	LO	250	N	N	19910406	061010	245	143	69	11
151	134	INDIA	PENNER RIVER-KRISHNA DEL	14.0N 79.0E	20.4N 84.0E	30	HO	250	N	N	19910406	061216	245	165	75	11
151	135	INDIA	MAHADI RIVER	20.5N 85.5E	19.4N 86.6E	60	LO	250	N	N	19910406	061300	245	176	76	11
151	136	BAY OF BENGAL	IRRAWADDY RIVER DELTA	16.0N 93.5E	16.1N 94.3E	50	LO	250	N	Y	19910406	061512	244	217	77	11
151	137	BURMA	IRRAWADDY RIVER DELTA	16.0N 94.0E	15.9N 94.6E	50	NV	250	N	Y	19910406	061518	244	218	77	11
151	138	BURMA	IRRAWADDY RIVER DELTA	16.5N 94.5E	15.8N 95.4E	40	LO	250	N	Y	19910406	061532	244	222	77	11
151	139	THAILAND	RESERVOIR-COAST	15.0N 98.5E	13.6N 99.4E	55	LO	250	N	Y	19910406	061644	244	241	75	11
151	140	THAILAND	RESERVOIR-COAST	14.0N 99.0E	13.3N 100.1E	50	LO	250	N	Y	19910406	061657	244	243	74	11

TABLE 4.3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
151	141	THAILAND	BANGKOK, BIGHT OF BANGKOK	13.5N 100.5E	12.8N 101.1E	50	LO	250	N	N	19910406	061714	244	247	74	11
151	142	VIETNAM	COAST-GULF OF THAILAND	10.5N 104.5E	10.4N 105.7E	45	LO	250	N	N	19910406	061839	244	259	70	11
151	143	GULF OF THAILAND	SOUTH TIP VIETNAM, SUNGLI	9.0N 104.0E	10.2N 106.0E	20	LO	250	N	Y	19910406	061845	244	260	69	11
151	144	VIETNAM	SOUTH TIP VIETNAM, SUNGLI	9.0N 105.0E	10.0N 106.4E	25	LO	250	N	Y	19910406	061852	244	261	69	11
151	145	VIETNAM	MOUTHS OF THE MEKONG	10.0N 106.5E	9.7N 107.1E	45	NV	250	N	Y	19910406	061904	243	262	68	11
151	146	SOUTH CHINA SEA	BORNEO, MALAYSIA-BRunei	5.0N 114.0E	6.5N 112.7E	40	LO	250	N	N	19910406	062050	243	270	62	11
151	147	SOUTH CHINA SEA	BORNEO-BRunei BAY	5.5N 115.0E	5.9N 113.8E	35	LO	250	N	Y	19910406	062111	243	272	61	11
151	148	MALAYSIA	BORNEO-KOTA KINABALU	6.0N 116.0E	4.5N 116.3E	40	LO	250	N	Y	19910406	062157	243	274	59	11
151	149	INDONESIA	BORNEO-SESAPUR RIVER	3.5N 117.0E	4.1N 116.9E	40	NV	250	N	Y	19910406	062210	243	275	58	11
151	150	INDONESIA	BORNEO-BERAU RIVER	2.0N 118.0E	3.7N 117.6E	40	LO	250	N	N	19910406	062223	243	275	57	11
151	151	INDONESIA	BORNEO-SIBUKO BAY	4.0N 118.5E	3.2N 118.6E	40	NV	250	N	N	19910406	062241	243	276	56	11
151	152	INDONESIA	BORNEO-MAHAKAM RIVER DEL	0.5N 118.0E	2.5N 119.8E	45	LO	250	N	N	19910406	062305	243	277	55	11
151	153	INDONESIA	SULAWESI-DONDO BAY	1.0N 120.5E	2.1N 120.5E	30	LO	250	N	Y	19910406	062318	243	277	54	11
151	154	INDONESIA	SULAWESI	1.0N 121.5E	1.9N 120.9E	25	NV	250	N	Y	19910406	062325	243	278	53	11
151	155	INDONESIA	UNAUNA ISLAND, SULAWESI	0.0 121.0E	1.6N 121.3E	25	LO	250	N	Y	19910406	062333	243	278	53	11
151	156	INDONESIA	UNAUNA ISLAND, SUNGLINT	0.0 121.0E	0.1N 123.8E	20	LO	250	N	Y	19910406	062422	243	279	50	11
151	157	INDONESIA	SULA ISLANDS	2.0S 126.0E	0.9S 125.5E	35	LO	250	N	N	19910406	062454	243	280	48	11
151	158	INDONESIA	NEW GUINEA, RIVER DELTA	5.5S 138.0E	6.8S 135.8E	50	LO	250	N	N	19910406	062810	242	282	36	11
151	159	AUSTRALIA-Q	PRINCE OF WALES I.	10.5S 142.0E	9.8S 141.2E	65	NV	250	N	Y	19910406	062951	242	283	30	11
151	159	AUSTRALIA-Q	CAPE YORK PENINSULA	11.5S 142.0E	9.9S 141.4E	25	LO	250	N	Y	19910406	062957	242	283	29	11
151	160	AUSTRALIA-Q	CAPE YORK PENINSULA	13.0S 143.5E	10.7S 142.9E	40	LO	250	N	N	19910406	063023	242	283	28	11
151	161	PAPUA NEW GUINEA	EASTERN TIP	10.5S 149.0E	12.3S 145.9E	25	LO	250	N	N	19910406	063118	242	282	24	11
151	162	SAUDI ARABIA	TUWAYQ PIVOT IRRIGATION	25.0N 45.5E	25.2N 44.3E	10	NV	250	N	Y	19910406	074129	246	129	62	12
151	163	SAUDI ARABIA	TUWAYQ PIVOT IRRIGATION	24.5N 45.5E	25.0N 45.0E	10	NV	250	N	Y	19910406	074140	246	130	63	12
151	164	SAUDI ARABIA	TUWAYQ PIVOT IRR.-RIYAD	24.0N 47.0E	24.7N 46.3E	10	NV	250	N	Y	19910406	074159	246	132	64	12
151	165	SAUDI ARABIA	AL HUFUF-DUNES-PIVOT IRR	25.5N 49.0E	24.4N 47.4E	15	LO	250	N	Y	19910406	074216	246	133	65	12
151	166	SAUDI ARABIA	GULF OF BAHRAIN-AL HUFUF	25.5N 50.0E	24.1N 48.7E	15	LO	250	N	Y	19910406	074237	246	135	66	12
151	167	SAUDI ARABIA	AD DAHNA SANDSEA-PIVOT I	23.5N 48.5E	23.6N 50.4E	5	LO	250	N	N	19910406	074304	246	138	67	12
151	168	SAUDI ARABIA	AL JAFURAH-SALWAH BAY	24.0N 50.5E	23.3N 51.3E	5	LO	250	N	N	19910406	074318	246	140	68	12
151	169	SAUDI ARABIA	OIL CAMPS-DUNES	24.0N 53.0E	23.0N 52.2E	10	NV	250	N	N	19910406	074333	246	142	69	12
151	170	SAUDI ARABIA	RUB AL KHALI	22.5N 54.0E	22.7N 53.4E	5	NV	250	N	N	19910406	074352	245	144	70	12
151	171	OMAN	NORTHEAST OMAN	22.5N 57.5E	21.9N 55.9E	10	LO	250	N	Y	19910406	074433	245	150	72	12
151	172	OMAN	WADIS-COAST-GULF OF OMAN	22.0N 58.0E	21.6N 56.7E	5	LO	250	N	Y	19910406	074446	245	152	72	12
151	173	OMAN	COAST-AL MASIRAH	21.0N 58.5E	21.1N 58.2E	10	LO	250	N	Y	19910406	074511	245	156	74	12
151	174	ARABIAN SEA	SUNGLINT-EDDIES-SHIP WAK	19.4N 62.5E	19.4N 62.5E	5	LO	250	N	Y	19910406	074623	245	173	76	12
151	175	ARABIAN SEA	SUNGLINT-EDDIES	18.5N 64.9E	18.5N 64.9E	0	LO	250	N	Y	19910406	074703	245	184	77	12
151	176	ARABIAN SEA	SUNGLINT-LINEAR LINES	18.1N 65.8E	18.1N 65.8E	0	LO	250	N	Y	19910406	074718	245	189	78	12
151	177	ARABIAN SEA	SUNGLINT	17.6N 67.1E	17.6N 67.1E	0	LO	250	N	Y	19910406	074741	245	196	78	12
151	178	ARABIAN SEA	SUNGLINT-SULLOY?	17.2N 67.8E	17.2N 67.8E	0	LO	250	N	Y	19910406	074754	245	200	78	12
151	179	ARABIAN SEA	SUNGLINT-EDDIES-SURFACTA	16.3N 69.9E	16.3N 69.9E	5	LO	250	N	N	19910406	074830	244	212	78	12

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	LONG	MADIR LAT	LONG	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL	OR
151	180	ARABIAN SEA	SUNGLINT-EDDIES	10.5S	120.5E	14.9N	72.9E	15	LO	250	N	N	19910406	074923	244	228	77	12
151	181	INDONESIA	SUMBA-CLOUDS	11.0S	121.5E	11.6S	120.8E	30	LO	250	N	Y	19910406	080421	242	283	26	12
151	182	INDONESIA	SAWU ISLAND-CLOUDS	11.0S	121.5E	12.0S	121.5E	30	LO	250	N	Y	19910406	080434	242	283	25	12
151	183	AUSTRALIA-WA	BUCCANEER ARCH., KING SOU	16.0S	123.5E	12.9S	123.4E	40	LO	250	N	N	19910406	080508	242	282	23	12
151	184	ALGERIA	OUARKIZ RIDGE	28.5N	8.5W	28.5N	7.7W	0	NV	250	N	N	19910406	080757	247	104	36	13
151	185	ALGERIA	TOUNASSINE ROCK DESERT	28.5N	8.5W	28.5N	5.9W	0	LO	250	N	Y	19910406	080822	247	105	38	13
151	186	ALGERIA	BEN TADJINE MOUNTAINS	28.5N	4.0W	28.5N	4.6W	0	NV	250	N	Y	19910406	080842	247	108	39	13
151	187	ALGERIA	TABELBALA RANGE	28.5N	3.0W	28.4N	3.2W	0	NV	250	N	Y	19910406	080902	247	107	40	13
151	188	ALGERIA	TABELBALA RANGE	28.5N	1.0W	28.4N	1.8W	0	NV	250	N	Y	19910406	080922	247	108	41	13
151	189	ALGERIA	TADEMAIT PLATEAU-ADRAR	28.5N	0.0	28.3N	0.5W	0	NV	250	N	Y	19910406	080941	246	109	43	13
151	190	ALGERIA	TADEMAIT PLATEAU	28.0N	1.5E	28.2N	0.8E	0	NV	250	N	Y	19910406	081001	246	110	44	13
151	191	ALGERIA	TADEMAIT PLATEAU	28.0N	3.0E	28.1N	2.2E	0	NV	250	N	Y	19910406	081021	246	111	45	13
151	192	ALGERIA	TADEMAIT PLATEAU	28.0N	4.5E	28.0N	3.6E	0	NV	250	N	Y	19910406	081042	246	112	46	13
151	193	ALGERIA	TADEMAIT PLATEAU	28.0N	5.5E	27.8N	5.0E	0	NV	250	N	Y	19910406	081102	246	113	48	13
151	194	ALGERIA	TINRHERT, TADEMAIT PLATEAU	27.5N	7.0E	27.7N	6.3E	0	NV	250	N	Y	19910406	081122	246	114	49	13
151	195	ALGERIA	ISAOUANE-N-IRRAREN	27.5N	8.0E	27.5N	7.7E	0	NV	250	N	Y	19910406	081142	246	115	50	13
151	196	ALGERIA	SAHARA	27.0N	9.5E	27.3N	9.0E	0	NV	250	N	Y	19910406	081202	246	117	51	13
151	197	LIBYA	SAHARA-PIVOT IRRIGATION	27.0N	10.5E	27.1N	10.6E	0	NV	250	N	Y	19910406	081226	246	118	53	13
151	198	LIBYA	MARZUQ ROCKY PLAIN	26.0N	12.5E	26.9N	12.0E	0	LO	250	N	Y	19910406	081246	246	119	54	13
151	199	LIBYA	ZEGHER ROCKY PLAIN	27.0N	13.0E	26.8N	12.4E	0	NV	250	N	Y	19910406	081252	246	120	54	13
151	200	LIBYA	ZEGHER ROCKY PLAIN	26.5N	14.0E	26.7N	13.0E	0	NV	250	N	Y	19910406	081302	246	120	55	13
151	201	LIBYA	SABHAH	27.0N	15.0E	26.5N	14.3E	0	NV	250	N	Y	19910406	081321	246	121	56	13
151	202	LIBYA	EL MARZUCHIA SAND DUNES	26.0N	16.5E	26.2N	15.7E	0	NV	250	N	Y	19910406	081342	246	123	57	13
151	203	LIBYA	BLACK HARIJ-AL FARID HIL	26.0N	17.0E	26.0N	17.0E	0	NV	250	N	Y	19910406	081402	246	124	58	13
151	204	LIBYA	AL FARID HILLS	26.0N	19.0E	25.7N	18.3E	0	NV	250	N	Y	19910406	081422	246	126	60	13
151	205	LIBYA	DUNES	25.5N	20.5E	25.4N	19.8E	0	NV	250	N	Y	19910406	081442	246	127	61	13
151	206	LIBYA	CALANCIO SAND SEA	25.0N	21.5E	25.1N	21.0E	0	NV	250	N	Y	19910406	081503	246	129	62	13
151	207	LIBYA	AL KUFRAH-PIVOT IRR.	25.0N	23.0E	24.8N	22.2E	0	NV	250	N	Y	19910406	081522	246	131	63	13
151	208	EGYPT	ROCKY DESERT-AL KUFRAH	24.5N	24.5E	24.4N	23.5E	0	NV	250	N	Y	19910406	081542	246	132	64	13
151	209	EGYPT	GLIF KEBIR PLATEAU	24.0N	25.5E	24.1N	24.7E	0	NV	250	N	Y	19910406	081601	246	134	65	13
151	210	EGYPT	GREAT SAND SEA	25.5N	27.5E	23.9N	25.4E	0	LO	250	N	N	19910406	081613	246	135	66	13
151	211	EGYPT	GILF KEBIR PLATEAU	24.0N	27.0E	23.7N	26.1E	0	NV	250	N	Y	19910406	081623	246	136	67	13
151	212	EGYPT	GREAT SAND SEA	24.0N	28.0E	23.4N	27.3E	0	NV	250	N	Y	19910406	081642	246	138	68	13
151	213	EGYPT	ROCKY AREA	23.0N	28.5E	23.1N	28.2E	0	NV	250	N	Y	19910406	081657	246	140	68	13
151	214	EGYPT	LAKE MASSER	22.5N	30.5E	22.6N	29.8E	0	NV	250	N	Y	19910406	081723	246	143	70	13
151	215	EGYPT	LAKE MASSER	22.0N	31.5E	22.2N	31.0E	5	NV	250	N	Y	19910406	081742	245	146	71	13
151	216	EGYPT	NUBIAN DESERT	22.0N	33.0E	21.8N	32.1E	25	NV	250	N	Y	19910406	081801	245	149	72	13
151	217	EGYPT	NUBIAN DESERT	21.5N	34.0E	21.4N	33.4E	25	NV	250	N	Y	19910406	081822	245	152	73	13
151	218	EGYPT	NUBIAN DESERT	21.5N	35.0E	21.1N	34.2E	15	NV	250	N	Y	19910406	081834	245	154	73	13
151	219	EGYPT	NUBIAN DESERT	21.0N	35.5E	20.9N	34.9E	5	NV	250	N	Y	19910406	081846	245	156	74	13

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	CENTER LON	MADIR LAT	MADIR LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
151	220	EGYPT	COAST-YUDEB WADI	20.0N	36.5E	20.6N	35.6E	10	NV	250	N	Y	19910406	091858	245	159	74	13
151	221	EGYPT	COAST-RED SFA	20.0N	37.0E	20.3N	36.3E	20	NV	250	N	Y	19910406	091910	245	161	75	13
151	222	ETHIOPIA	COAST-DEHALAK ISLAND	16.5N	39.0E	19.9N	37.5E	40	LO	250	N	Y	19910406	091929	245	165	76	13
151	223	RED SEA	SUNGLINT-OFF COAST SAUDI			19.6N	38.2E	10	LO	250	N	Y	19910406	091942	245	169	76	13
151	224	RED SEA	CENTRAL SAUDI COAST	18.5N	40.0E	19.1N	39.4E	10	LO	250	N	Y	19910406	092002	245	174	77	13
151	225	SAUDI ARABIA	COAST-QUTU ISLAND	18.5N	41.0E	18.7N	40.6E	20	NV	250	N	Y	19910406	092022	245	179	77	13
151	226	SAUDI ARABIA	HIBATA-SUNGLINT	18.0N	42.5E	18.2N	41.8E	15	NV	250	N	Y	19910406	092042	245	185	78	13
151	227	SAUDI ARABIA	FARASAN ISLANDS	16.0N	42.0E	17.7N	42.9E	15	LO	250	N	Y	19910406	092101	245	191	78	13
151	228	SAUDI ARABIA	WADI IDIMAH	18.5N	44.0E	17.5N	43.3E	35	LO	250	N	Y	19910406	092108	245	194	78	13
151	229	SAUDI ARABIA	WADI NAJHRAN-NAIRAN	17.5N	44.0E	17.2N	44.1E	30	NV	250	N	Y	19910406	092122	245	198	78	13
151	230	SAUDI ARABIA	TUMAYQ IRRIGATION	20.0N	45.0E	17.0N	44.5E	5	LO	250	N	N	19910406	092129	245	201	78	13
151	231	YEMEN (SANA)	WADI NAJHRAN-NAIRAN	17.0N	44.5E	16.7N	45.2E	10	NV	250	N	Y	19910406	092141	245	205	78	13
151	232	YEMEN (ADEN)	AS SAB'ATAYN DUNES	18.0N	47.0E	16.2N	46.3E	5	NV	250	N	Y	19910406	092201	245	211	78	13
151	233	YEMEN (ADEN)	WADI DAW'AN-COAST	15.5N	48.5E	15.5N	47.7E	5	NV	250	N	Y	19910406	092226	244	219	78	13
151	234	YEMEN (ADEN)	HADRAMAWT MNTS. -COAST	15.0N	49.0E	15.1N	48.6E	5	NV	250	N	Y	19910406	092242	244	224	77	13
151	235	YEMEN (ADEN)	COAST	14.0N	50.5E	14.6N	49.7E	15	NV	250	N	Y	19910406	092302	244	230	77	13
151	236	SOCOTRA	ENTIRE ISLAND-SUNGLINT	12.5N	53.5E	12.8N	53.4E	10	NV	250	N	N	19910406	092407	244	245	75	13
151	237	MALDIVES	KOLUMADULU,NILANDU ATOLS	2.5N	72.5E	2.7N	71.6E	15	NV	250	N	N	19910406	092949	243	277	56	13
151	238	ATLANTIC OCEAN	LAYERED CLOUDS			27.9N	19.7W	95	LO	250	N	N	19910406	104417	246	112	47	14
151	239	CANARY ISLANDS	HIERRO-CLOUD VORTICES			27.9N	19.0W	80	LO	250	N	N	19910406	104426	246	113	47	14
151	240	WESTERN SAHARA	COAST-INDS CONVEYOR BELT	26.0N	14.5W	27.2N	13.6W	50	LO	250	N	N	19910406	104547	246	117	52	14
151	241	WESTERN SAHARA	TINDOUF SYNCLINE	27.0N	12.0W	26.7N	10.9W	20	LO	250	N	N	19910406	104628	246	120	54	14
151	242	AFRICA	ALGERIA-MAURIT-ERG IGUID			26.3N	8.7W	5	LO	250	N	N	19910406	104700	246	122	56	14
151	243	MALI	ERG CHECH	25.5N	5.0W	25.5N	4.7W	0	NV	250	N	Y	19910406	104802	246	126	60	14
151	244	ALGERIA	SAFRA ROCK DESERT	25.5N	5.0W	25.3N	4.0W	0	LO	250	N	Y	19910406	104813	246	127	61	14
151	245	ALGERIA	ERG CHECH			24.6N	1.1W	0	LO	250	N	Y	19910406	104857	246	130	63	14
151	246	ALGERIA	ASSEDJRAD ESCARPMENT	25.0N	1.0E	24.3N	0.3E	0	NV	250	N	Y	19910406	104919	246	132	65	14
151	247	ALGERIA	IN AFARAG SAND DUNES	23.5N	2.5E	23.4N	3.3E	0	NV	250	N	Y	19910406	105007	246	137	67	14
151	248	ALGERIA	TIDERIDJAUINE MOUNTAIN	22.5N	2.5E	23.3N	3.7E	0	LO	250	N	Y	19910406	105014	246	138	68	14
151	249	ALGERIA	AHAGGAR MOUNTAINS	22.5N	5.0E	22.7N	5.7E	0	NV	250	N	Y	19910406	105045	246	141	69	14
151	250	ALGERIA	AHAGGAR PLATEAU	21.5N	6.5E	22.1N	7.4E	0	LO	250	N	Y	19910406	105114	245	145	71	14
151	251	ALGERIA	AHAGGAR MOUNTAINS	23.0N	7.0E	21.8N	8.2E	0	LO	250	N	Y	19910406	105127	245	147	71	14
151	252	ALGERIA	DU TAFASSASSET DESERT			20.8N	11.3E	0	LO	250	N	N	19910406	105217	245	155	74	14
151	253	AFRICA	NIGER-CHAD-NEAR TIBESTI			19.2N	15.3E	0	LO	250	N	N	19910406	105325	245	171	76	14
151	254	CHAD	NEAR TIBESTI			18.2N	17.8E	0	LO	250	N	N	19910406	105407	245	183	78	14
151	255	CHAD	ERG DU DJOURAB	16.5N	18.5E	17.5N	19.4E	10	LO	250	N	N	19910406	105434	245	191	78	14
151	256	CHAD	ENNEDI PLAT-HABILI HILLS	16.0N	23.0E	16.3N	22.2E	15	LO	250	N	N	19910406	105524	245	208	78	14
151	257	CHAD	ENNEDI UMM SAQAT	15.5N	23.0E	15.5N	23.9E	25	LO	250	N	N	19910406	105553	244	218	78	14
151	258	SUDAN	CLOUDS-WADIS			14.5N	26.0E	75	LO	250	N	N	19910406	105631	244	229	77	14
151	259	SUDAN	WADI AL GHALLAH	12.0N	27.5E	13.8N	27.5E	15	LO	250	N	N	19910406	105657	244	236	76	14



TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		NADIR		CC	TL	FL	E	S	DATE	GMT	AL	AZ	EL	OR
				LAT	LONG	LAT	LONG											SUM
151	280	SUDAN	WADI AYAK	13.0N	29.0E	12.8N	29.6E	15	NV	250	N	N	19910406	105735	244	245	75	14
152	1	ETHIOPIA	LAKE ABAYA, LAKE CH'AMO	6.5N	37.5E	7.9N	38.8E	70	LO	250	N	N	19910406	110022	243	267	67	14
152	2	ETHIOPIA	GENALE RIVER	5.0N	41.5E	6.3N	41.6E	60	LO	250	N	Y	19910406	110118	243	271	63	14
152	3	ETHIOPIA	WABE GESTRO RIVER	6.0N	41.5E	6.2N	41.8E	50	NV	250	N	Y	19910406	110122	243	271	63	14
152	4	ETHIOPIA	KUS DULAMC MOUNTAINS	7.0N	42.5E	6.0N	42.0E	40	NV	250	N	Y	19910406	110127	243	272	63	14
152	5	ETHIOPIA	SHEBELE RIVER	5.0N	44.5E	5.5N	42.9E	40	LO	250	N	N	19910406	110143	243	273	62	14
152	6	SOMALIA	NEAR COAST-SAND DUNES	4.0N	46.5E	3.8N	45.8E	50	NV	250	N	Y	19910406	110239	243	275	59	14
152	7	SOMALIA	COAST-ITALA	3.0N	45.5E	3.7N	46.0E	50	NV	250	N	Y	19910406	110242	243	276	59	14
152	8	SOMALIA	COAST-MUGDISHO	2.5N	45.0E	3.7N	46.2E	55	LO	250	N	Y	19910406	110245	243	276	58	14
152	9	SOMALIA	COAST-DUNES-MUGDISHO	2.0N	44.0E	3.4N	46.6E	60	LO	250	N	Y	19910406	110253	243	276	58	14
152	10	SOMALIA	COAST-DUNES-ITALA	2.5N	47.0E	2.6N	47.9E	15	NV	250	N	Y	19910406	110318	243	277	56	14
152	11	SOMALIA	COAST-DUNES-CLOUDS	3.0N	47.5E	2.5N	48.1E	15	NV	250	N	Y	19910406	110323	243	277	56	14
152	12	SOMALIA	COAST-DUNES	3.5N	48.0E	2.3N	48.4E	15	LO	250	N	Y	19910406	110328	243	277	56	14
152	13	MAURITANIA	RICHAT STRUCTURE-E.CHECH	20.5N	10.5W	19.9N	10.3W	0	NV	250	N	N	19910406	122622	245	161	75	15
152	14	NIGERIA	BENUE RIVER	9.5N	11.5E	9.3N	12.3E	20	NV	250	N	Y	19910406	123303	243	263	70	15
152	15	NIGERIA	BENUE RIVER-RESERVOIR	9.0N	13.0E	8.5N	13.8E	25	NV	250	N	Y	19910406	123330	243	265	68	15
152	16	AFRICA	CHAD,CAMEROON,C.AFRICA R	7.3N	15.9E	7.3N	15.9E	60	LO	250	N	N	19910406	123411	243	269	66	15
152	17	CENTRAL AFRICAN REP.	OUHMAN R.-BOSSANGOA	6.5N	17.0E	6.4N	17.5E	25	NV	250	N	Y	19910406	123440	243	271	64	15
152	18	CENTRAL AFRICAN REP.	OUHMAN R.-BOSSANGOA	6.0N	18.0E	5.7N	18.6E	45	NV	250	N	Y	19910406	123502	243	272	63	15
152	19	ZAIRE	UBANGI R.-BANGUI	5.0N	19.5E	5.1N	19.8E	65	NV	250	N	Y	19910406	123525	243	274	62	15
152	20	ZAIRE	UBANGI RIVER	4.0N	20.0E	4.4N	21.0E	70	LO	250	N	Y	19910406	123546	243	275	60	15
152	21	ZAIRE	UBANGI R.-BUSINGA	3.5N	21.0E	3.9N	21.9E	70	LO	250	N	Y	19910406	123604	243	275	59	15
152	22	ZAIRE	LAKE EDWARD	0.5S	29.5E	0.8S	29.9E	85	NV	250	N	N	19910406	123838	243	281	50	15
152	23	TANZANIA	LAKE VICTORIA	2.5S	32.5E	2.7S	33.1E	40	NV	250	N	N	19910406	123939	242	282	46	15
152	24	TANZANIA	L. NATRON-L. MANYARA	3.0S	36.0E	3.1S	33.8E	50	LO	250	N	Y	19910406	123951	242	282	46	15
152	25	TANZANIA	L. MANYARA	4.0S	35.5E	3.2S	34.0E	50	LO	250	N	Y	19910406	123956	242	282	45	15
152	26	TANZANIA	NEAR L. MANYARA	4.5S	36.0E	3.4S	34.3E	50	LO	250	N	Y	19910406	124001	242	282	45	15
152	27	TANZANIA	MT. KITUMBEINE	3.0S	36.5E	3.7S	34.9E	50	LO	250	N	Y	19910406	124012	242	282	44	15
152	28	TANZANIA	MT. KITUMBEINE,KILIMANJA	3.0S	36.5E	3.8S	35.1E	40	LO	250	N	Y	19910406	124017	242	282	44	15
152	29	TANZANIA	SOUTH PARE MNTS.	4.5S	37.5E	4.0S	35.4E	45	LO	250	N	Y	19910406	124023	242	282	44	15
152	30	TANZANIA	MNTS., WOODED AREA	5.0S	36.0E	4.5S	36.2E	55	NV	250	N	Y	19910406	124038	242	283	43	15
152	31	TANZANIA	MNTS., NEAR COAST	6.0S	38.0E	4.8S	36.7E	40	LO	250	N	Y	19910406	124047	242	283	42	15
152	32	KENYA	COAST-PENBA ISLAND	4.5S	39.0E	4.8S	36.9E	45	LO	250	N	Y	19910406	124050	242	283	42	15
152	33	TANZANIA	USAMBARA MOUNTAINS	4.5S	38.5E	5.0S	37.1E	45	NV	250	N	Y	19910406	124054	242	283	42	15
152	34	TANZANIA	PENBA, ZANZIBAR ISLANDS	5.5S	39.5E	5.1S	37.3E	15	LO	250	N	Y	19910406	124058	242	283	41	15
152	35	TANZANIA	DAR ES SALAAM,ZANZIBAR I	6.5S	39.0E	5.2S	37.5E	25	LO	250	N	Y	19910406	124102	242	283	41	15
152	36	TANZANIA	L.KITANGIRI,WEMBERE SWAM	4.5S	34.0E	5.5S	38.0E	70	LO	250	N	N	19910406	124112	242	283	41	15
152	37	TANZANIA	RUFJI RIVER, COAST	8.0S	38.5E	6.3S	39.4E	70	LO	250	N	Y	19910406	124139	242	283	39	15
152	38	TANZANIA	KISWERE HAVEN, COAST	9.5S	39.5E	6.5S	39.8E	60	LO	250	N	Y	19910406	124146	242	283	38	15
152	39	MOZAMBIQUE	CABO DEGADO, COAST	11.0S	41.0E	7.6S	41.7E	60	LO	250	N	Y	19910406	124221	242	283	36	15

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL OR
152	40	MOZAMBIQUE	CABO DEGADO, COAST	11.0S 40.0E	8.2S 42.8E	65	LO	250	N	Y	19910406	124242	242	283	35 15
152	41	MADAGASCAR	MAHAJAMBA BAY	14.5S 47.0E	10.9S 47.9E	50	LO	250	N	Y	19910406	124416	242	283	29 15
152	42	MADAGASCAR	MAHAJAMBA, BOMBETOKA BAY		11.1S 48.1E	75	LO	250	N	Y	19910406	124421	242	283	29 15
152	43	MADAGASCAR	CAP D'AMBRE	12.5S 49.0E	11.4S 48.8E	45	NV	250	N	Y	19910406	124434	242	283	28 15
152	44	MADAGASCAR	CAP D'AMBRE	12.0S 48.5E	11.6S 49.2E	30	NV	250	N	Y	19910406	124440	242	283	28 15
152	45	MADAGASCAR	NORTH EASTERN TIP	12.5S 48.5E	11.8S 49.6E	45	LO	250	N	Y	19910406	124448	242	283	27 15
152	46	GUINEA	COAST-SHUTTLE TAIL	10.0N 14.5W	23.1S 163.7W	10	NV	250	N	Y	19910406	050525	243	275	-4 10
152	47	GUINEA	CONAKRY-SHUTTLE TAIL	9.5N 13.5W	10.8N 14.4W	30	LO	250	N	Y	19910406	140537	244	256	73 16
152	48	ANGOLA	ANGOLA, NAMIBIA COAST		5.9S 14.8E	40	HO	250	N	Y	19910406	141451	242	283	40 16
152	49	ANGOLA	COAST-ANGOLA & NAMIBIA	13.5S 12.5E	6.6S 16.1E	50	HO	250	N	Y	19910406	141515	242	283	39 16
152	50	AFRICA	ZAIRE, ANGOLA, ZAMBIA		10.5S 23.3E	85	LO	250	N	Y	19910406	141729	242	284	30 16
152	51	AFRICA	ZAIRE, ANGOLA, ZAMBIA		11.3S 24.8E	90	LO	250	N	Y	19910406	141757	242	283	29 16
152	52	ZAMBIA	ZAMBEZI RIVER	16.5S 22.5E	12.1S 26.3E	85	LO	250	N	Y	19910406	141825	242	283	27 16
152	53	ZAMBIA	ZAMBEZI RIVER	16.5S 22.5E	12.6S 27.3E	85	HO	250	N	Y	19910406	141843	242	283	26 16
152	54	ZAMBIA	LAKE KARIBA	17.5S 27.5E	13.6S 29.3E	30	LO	250	N	Y	19910406	141919	242	283	23 16
152	55	ZIMBABWE	LAKE KARIBA, NTWETWE	18.5S 27.0E	14.3S 30.8E	30	LO	250	N	Y	19910406	141945	242	283	22 16
152	56	ZIMBABWE	LAKE KARIBA	18.0S 27.0E	14.5S 31.2E	30	LO	250	N	Y	19910406	141953	242	283	21 16
152	57	ZIMBABWE	MASHABA MOUNTAINS	19.0S 30.0E	15.1S 32.3E	30	LO	250	N	Y	19910406	142012	242	282	20 16
152	58	ZIMBABWE	RIO SAVE	21.0S 32.0E	15.9S 34.0E	10	LO	250	N	Y	19910406	142043	242	282	18 16
152	59	MOZAMBIQUE	RIO SAVE	22.0S 33.5E	16.4S 35.3E	40	LO	250	N	Y	19910406	142105	242	282	17 16
152	60	MOZAMBIQUE	RIO SAVE-COAST-HAZE	21.0S 34.0E	17.2S 37.0E	40	LO	250	N	Y	19910406	142135	242	281	15 16
152	61	MOZAMBIQUE	ZAMBEZI RIVER DELTA	19.0S 36.0E	17.7S 38.2E	5	LO	250	N	N	19910406	142155	242	281	14 16
152	62	MEXICO	RIO FUERTE, LA MOCHIS	26.0N 109.0W	27.0N 108.0W	5	LO	250	N	N	19910406	165948	246	116	51 18
152	63	MEXICO	SIERRA MADRE OCCIDENTAL	26.0N 106.5W	26.6N 105.8W	30	LO	250	N	N	19910406	170021	246	118	53 18
152	64	MEXICO	TORREON	25.0N 103.5W	26.4N 104.4W	35	LO	250	N	Y	19910406	170042	246	119	55 18
152	65	MEXICO	NEAR TORREON	24.5N 103.5W	26.1N 102.8W	25	LO	250	N	Y	19910406	170106	246	121	56 18
152	66	MEXICO	CLOUDS		25.4N 100.0W	95	LO	250	N	N	19910406	170149	246	123	59 18
152	67	SOUTH AMERICA	COLUMBIA, PANAMA, G. URABA		6.9N 78.9W	90	LO	250	N	N	19910406	184807	244	270	67 19
152	68	BRAZIL	AMAZON RIVER-CLOUDS	2.5S 64.5W	2.6S 62.4W	50	LO	250	N	N	19910406	185322	243	282	48 19
152	69	BRAZIL	AMAZON RIVER-CLOUDS	3.5S 62.5W	2.9S 62.0W	85	LO	250	N	N	19910406	185331	243	283	48 19
152	70	BRAZIL	RIO SAO FRANCISCO, GRIDS	13.0S 43.5W	13.4S 42.8W	25	NV	250	N	N	19910406	185928	243	284	25 19
152	71	GALAPAGOS ISLANDS	SAN SALVADOR, ISABELA ILS	0.5S 90.5W	0.9S 89.2W	25	NV	250	N	N	19910406	202552	243	281	52 20
152	72	PERU	POINT AGUJA, SECHURA BAY	6.0S 81.0W	5.5S 81.3W	20	NV	250	N	N	19910406	202823	243	284	43 20
152	73	USA-HI	OAHU, MOLOKAI, LANAI	21.5N 157.5W	21.8N 158.1W	35	NV	250	N	Y	19910406	214542	245	139	70 21
152	74	USA-HI	MOLOKAI, LANAI, MAUI	21.5N 157.0W	21.3N 157.2W	40	NV	250	N	Y	19910406	214557	245	141	71 21
152	75	USA-HI	HAWAII, MAUNA KEA-CLOUDS	20.5N 155.0W	20.8N 156.0W	90	NV	250	N	Y	19910406	214618	245	144	72 21
152	76	USA-HI	MAUI-CLOUDS	20.5N 155.5W	20.4N 154.9W	90	NV	250	N	Y	19910406	214635	245	146	73 21
152	77	LIBYA	COAST-MED.-CRETE		27.2N 24.1E	50	HO	250	N	N	19910407	051814	246	89	14 26
152	78	EGYPT	SALT PANS NEAR QATTARA D	28.5N 27.0E	27.6N 26.7E	0	NV	250	N	N	19910407	051853	246	91	17 26
152	79	EGYPT	NILE R. VALLEY-G.OF SUEZ	27.5N 31.5E	27.7N 27.9E	0	LO	250	N	N	19910407	051911	246	91	18 26

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	LONG	MADIR LAT	LONG	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
152	80	EGYPT	GR. BITTER L.-FIRES,NILE	30.5N	33.0E	27.8N	28.6E	0	LO	250	N	N	19910407	051922	246	92	18	26
152	81	EGYPT	SINAI PEN.-G.OF AQABA	28.5N	34.5E	28.2N	33.1E	0	NV	250	N	N	19910407	052028	246	94	23	26
152	82	JORDAN	DEAD SEA	31.0N	35.5E	28.3N	34.0E	0	LO	250	N	N	19910407	052041	246	95	23	26
152	83	EGYPT	SINAI PEN.-SUEZ CANAL	30.5N	33.5E	28.4N	35.7E	0	LO	250	N	N	19910407	052106	246	96	25	26
152	84	SAUDI ARABIA	AL HIJAZ	27.5N	36.5E	28.4N	36.6E	0	NV	250	N	N	19910407	052119	246	96	26	26
152	85	SAUDI ARABIA	AL HARRAH,VOLCANIC FIELD	30.5N	38.5E	28.5N	38.0E	0	LO	250	N	N	19910407	052139	246	97	27	26
152	86	SAUDI ARABIA	WADIS, SMOKE FROM KUWAIT	29.5N	42.5E	28.5N	41.4E	0	LO	250	N	N	19910407	052229	246	98	30	26
152	87	SAUDI ARABIA	PIVOT IRR.-KUWAIT SMOKE	27.0N	47.5E	28.5N	42.7E	15	LO	250	N	Y	19910407	052247	246	100	31	26
152	88	SAUDI ARABIA	COAST-KUWAIT OIL FIRES	28.5N	48.5E	28.5N	44.0E	0	LO	250	N	Y	19910407	052307	246	101	33	26
152	89	PERSIAN GULF	KUWAIT-KUWAIT OIL FIRES	29.0N	48.7E	28.5N	45.6E	0	LO	250	N	Y	19910407	052330	246	102	34	26
152	90	IRAQ	TIGRIS R.-HAMMAR MARSH	31.0N	47.5E	28.4N	46.6E	0	LO	250	N	Y	19910407	052345	246	102	35	26
152	91	KUWAIT	FAYLAKA I.-KUWAIT FIRES	29.5N	48.5E	28.4N	47.9E	0	LO	250	N	Y	19910407	052403	246	103	36	26
152	92	IRAQ	ZUBAY R.-KUWAIT FIRES	30.0N	48.0E	28.3N	48.7E	0	LO	250	N	Y	19910407	052415	246	104	37	26
152	93	PERSIAN GULF	KUWAIT COAST-OIL SMOKE	28.5N	49.0E	28.3N	49.9E	0	NV	250	N	N	19910407	052432	246	104	38	26
152	94	IRAQ	IRAQ-IRAN BOR.-OIL FIRES	30.5N	48.3E	28.2N	50.8E	0	LO	250	N	Y	19910407	052445	246	105	39	26
152	95	IRAN	TIGRIS R. DELTA-OIL FIRE	30.1N	48.8E	28.2N	51.3E	0	LO	250	N	Y	19910407	052453	246	105	39	26
152	96	IRAN	ZAGROS MOUNTAINS	28.0N	52.0E	28.0N	52.9E	0	LO	250	N	N	19910407	052517	246	106	41	26
152	97	IRAN	ZAGROS MNTS.-SALT PANS	30.5N	54.5E	27.9N	54.0E	0	LO	250	N	N	19910407	052533	246	107	42	26
152	98	IRAN	COAST-HORMOZ I.-LARAK I.	27.0N	57.0E	27.6N	56.7E	10	NV	250	N	N	19910407	052612	246	109	44	26
152	99	OMAN	AKHDAR MNTS.-COAST	24.5N	58.5E	27.4N	58.1E	60	LO	250	N	N	19910407	052634	246	110	46	26
152	100	IRAN	IRAN-PAKISTAN BOR.-MNTS.	28.0N	62.0E	27.2N	59.8E	5	LO	250	N	N	19910407	052658	246	111	47	26
152	101	PAKISTAN	CENTRAL MAKRAK RANGE	28.5N	65.0E	26.8N	62.3E	30	LO	250	N	N	19910407	052736	246	113	49	26
152	102	PAKISTAN	INDUS RIVER	25.0N	68.5E	26.0N	66.3E	50	LO	250	N	N	19910407	052837	246	116	53	26
152	103	INDIA	GULF OF KUTCH	23.0N	70.0E	25.5N	68.7E	50	LO	250	N	N	19910407	052913	246	118	55	26
152	104	INDIA	GULF OF KHAMBHAT	22.0N	72.5E	25.1N	70.5E	20	LO	250	N	Y	19910407	052941	246	120	57	26
152	105	INDIA	GULF OF KHAMBHAT	22.0N	73.0E	24.3N	73.7E	15	LO	250	N	Y	19910407	053032	246	123	60	26
152	106	INDIA	NARMADA R.-RESERVOIR	22.5N	78.0E	23.7N	75.7E	5	LO	250	N	Y	19910407	053103	246	125	62	26
152	107	INDIA	WAINGANG R., RESERVOIRS	21.0N	80.5E	22.7N	79.1E	5	LO	250	N	N	19910407	053157	246	129	65	26
152	108	INDIA	HIRAKUD RES.-MAHANADI R.	21.0N	83.5E	21.7N	82.1E	5	NV	250	N	N	19910407	053246	246	133	68	26
152	109	INDIA	MAHANADI R.-COAST	20.5N	85.0E	21.0N	84.1E	15	NV	250	N	Y	19910407	053319	246	136	70	26
152	110	INDIA	MAHANADI R.DELTA-COAST	20.0N	87.0E	20.2N	86.4E	50	NV	250	N	Y	19910407	053358	245	140	72	26
152	111	BAY OF BENGAL	PART OF BANGLADESH COAST	21.0N	91.0E	18.9N	89.7E	55	LO	250	N	N	19910407	053453	245	149	75	26
152	112	BURMA	RAMRE I.-COMBERMERE BAY	19.5N	93.5E	18.2N	91.5E	60	LO	250	N	N	19910407	053523	245	154	77	26
152	113	BURMA	COAST-DANSON BAY	17.0N	94.0E	17.6N	92.8E	40	LO	250	N	N	19910407	053546	245	160	78	26
152	114	BURMA	IRRAWADDY RIVER DELTA	16.5N	96.0E	16.3N	95.8E	15	NV	250	N	N	19910407	053639	245	176	80	26
152	115	BURMA	SALWEEN R.-CLOUDS-HAZE	18.0N	98.0E	15.9N	96.5E	75	LO	250	N	N	19910407	053651	245	180	80	26
152	116	BURMA	HEINZE R.-RESERVOIR	14.5N	98.0E	15.5N	97.5E	25	LO	250	N	Y	19910407	053708	245	187	81	26
152	117	THAILAND	BANGKOK-HAZE	14.5N	100.0E	15.0N	98.5E	40	LO	250	N	N	19910407	053726	245	194	81	26
152	118	BURMA	MALAY PEN.-TENASSERIM R.	12.0N	99.0E	14.2N	100.3E	30	LO	250	N	N	19910407	053758	245	208	81	26
152	119	KAMPUCHEA	MNTS. NEAR COAST&CHANG I	13.5N	102.5E	13.7N	101.2E	80	NV	250	N	Y	19910407	053815	245	216	81	26

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		MADIR		CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN	EL	OR
				LAT	LONG	LAT	LONG												
152	120	KAMPUCHEA	MNTS. -COAST-CHANG I.	13.0N	102.5E	13.0N	102.7E	70	NV	250	N	Y	19910407	053841	244	226	80	26	
152	121	VIETNAM	S. TIP-MOUTHS OF MEKONG	9.5N	105.5E	12.5N	103.7E	55	LO	250	N	N	19910407	053859	244	233	80	26	
152	122	VIETNAM	SOUTH COAST-HO CHI MINH	10.5N	107.5E	12.1N	104.4E	55	LO	250	N	N	19910407	053912	244	237	79	26	
152	123	VIETNAM	EAST COAST-NHA TRANG I.	12.5N	109.0E	11.8N	104.9E	60	LO	250	N	N	19910407	053922	244	240	79	26	
152	124	KAMPUCHEA	LAKE SAP	12.5N	104.5E	11.5N	105.5E	65	LO	250	N	N	19910407	053933	244	243	79	26	
152	125	KAMPUCHEA	MEKONG RIVER-CLOUDS	12.5N	106.5E	11.2N	106.1E	90	LO	250	N	N	19910407	053943	244	246	78	26	
152	126	VIETNAM	SOUTHEAST COAST	12.0N	108.5E	10.7N	107.7E	50	LO	250	N	N	19910407	054000	244	250	78	26	
152	127	SOUTH CHINA SEA	VIETNAM COAST-HAI NAN TA	10.4N	107.7E			70	HO	250	N	N	19910407	054013	244	253	77	26	
152	128	VIETNAM	SUNGLINT, EDDIES, MEKONG	10.0N	108.0E	9.9N	108.6E	40	NV	250	N	Y	19910407	054030	244	256	76	26	
152	129	VIETNAM	SUNGLINT, EDDIES, MEKONG	10.5N	107.5E	9.5N	109.3E	60	LO	250	N	Y	19910407	054043	244	259	76	26	
152	130	VIETNAM	MOUTHS OF MEKONG	9.5N	106.5E	9.2N	109.8E	50	LO	250	N	N	19910407	054052	244	260	75	26	
152	131	VIETNAM	SE COAST	12.0N	109.5E	8.8N	110.6E	50	LO	250	N	N	19910407	054108	244	262	74	26	
152	132	SOUTH CHINA SEA	INTERNAL WAVES			8.0N	112.0E	45	LO	250	N	N	19910407	054133	244	266	73	26	
152	133	SOUTH CHINA SEA	DALLAS REEF-CURRENT BOUN	7.0N	113.0E	6.3N	115.1E	40	LO	250	N	N	19910407	054232	244	272	70	26	
152	134	MALAYSIA	BORNEO-PAPAR-SUNGLINT	6.0N	116.0E	5.7N	116.2E	40	NV	250	N	Y	19910407	054252	244	273	68	26	
152	135	MALAYSIA	BORNEO-PEGATAN R.-SUNGLT	5.5N	116.0E	5.3N	116.8E	45	NV	250	N	Y	19910407	054304	244	274	68	26	
152	136	PHILIPPINES	CULTON I.-MINDOR-PANAY	12.0N	120.0E	4.7N	117.9E	30	HO	250	N	Y	19910407	054325	244	275	66	26	
152	137	PHILIPPINES	CEBU-NEGROS-BOHO-LEYTE	11.5N	124.0E	4.3N	118.6E	40	HO	250	N	Y	19910407	054339	244	276	66	26	
152	138	INDONESIA	BORNEO-STBUKO BAY-SUNGLT	4.0N	118.0E	3.8N	119.5E	40	LO	250	N	N	19910407	054355	244	277	65	26	
152	139	PHILIPPINES	LEYTE-CEBU-BOHO	11.0N	125.0E	3.1N	120.7E	50	HO	250	N	Y	19910407	054418	243	278	63	26	
152	140	INDONESIA	SULAWESI-NORTHERN SHORE	1.5N	122.0E	2.3N	122.0E	25	NV	250	N	N	19910407	054443	243	279	62	26	
152	141	INDONESIA	SULAWESI-EASTERN END	1.0N	124.5E	1.7N	123.0E	25	NV	250	N	Y	19910407	054503	243	280	61	26	
152	142	INDONESIA	SULAWESI-EAST END-SUNGLT	0.5N	124.5E	0.3S	126.4E	25	LO	250	N	Y	19910407	054608	243	282	57	26	
152	143	INDONESIA	SERAM-SED PLUMES-STORMS	3.0S	130.0E	2.3S	129.8E	30	NV	250	N	Y	19910407	054713	243	284	52	26	
152	144	INDONESIA	SERAM-SED PLUMES-STORMS	3.0S	130.0E	2.7S	130.6E	30	NV	250	N	Y	19910407	054727	243	284	52	26	
152	145	INDONESIA	BINTUNI BAY	2.5S	133.5E	3.7S	132.3E	50	LO	250	N	N	19910407	054801	243	284	50	26	
152	146	INDONESIA	SAREBA BAY	3.5S	135.5E	4.4S	133.4E	55	LO	250	N	N	19910407	054822	243	285	48	26	
152	147	INDONESIA	COAST-ARAFURA SEA-DELTA			7.1S	138.2E	90	LO	250	N	N	19910407	054952	243	285	43	26	
152	148	INDONESIA	COAST-PAPUA N. GUINEA BOR	8.5S	140.5E	7.6S	139.2E	75	LO	250	N	N	19910407	055011	243	286	41	26	
152	149	AUSTRALIA-Q	MOA I.-BANDU I.-TORRES S	10.0S	142.5E	9.6S	142.8E	70	NV	250	N	Y	19910407	055119	243	286	37	26	
152	150	AUSTRALIA-Q	MOA I.-BANDU I.-TORRES S	10.0S	142.5E	9.9S	143.4E	75	NV	250	N	Y	19910407	055130	243	286	36	26	
152	151	AUSTRALIA-Q	CAPE MELVILLE-GR.BARRIER	13.5S	144.5E	11.2S	145.8E	75	LO	250	N	N	19910407	055214	243	286	34	26	
152	152	PAPUA NEW GUINEA	HOOD BAY-COAST-CORAL SEA	10.0S	148.0E	11.9S	147.1E	50	LO	250	N	N	19910407	055237	243	285	32	26	
152	153	PAPUA NEW GUINEA	LONG REEF-CONFLICT GROUP	11.0S	151.0E	13.6S	150.5E	70	LO	250	N	N	19910407	055340	243	285	28	26	
152	154	CORAL SEA	LIHOU REEFS	17.0S	152.0E	15.0S	153.4E	75	LO	250	N	N	19910407	055432	243	285	25	26	
152	155	CORAL SEA	CLOUDS			16.7S	157.3E	80	LO	250	N	N	19910407	055539	243	284	21	26	
152	156	PACIFIC OCEAN	CLOUDS			17.7S	159.6E	80	LO	250	N	N	19910407	055619	243	283	18	26	
152	157	NEW CALEDONIA	FRANCE, ENTRECASTEAUX R.	18.5S	163.0E	19.1S	162.9E	25	NV	250	N	N	19910407	055716	243	282	15	26	
152	158	PACIFIC OCEAN	CLOUDS-HORIZON, UNDEREXPO			24.4S	179.0E												
152	159	ALGERIA	TADEMAIT PLATEAU	27.5N	4.0E	27.7N	4.4E	0	NV	250	N	N	19910407	055243	246	91	18	27	

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	CENTER LON	NADIR LAT	NADIR LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL	OR
152	180	ALGERIA	GRAND ORIENTAL	29.0N	5.5E	27.9N	6.1E	0	NV	250	N	Y	19910407	065307	246	92	19	27
152	181	ALGERIA	GRAND ORIENTAL	29.5N	6.5E	28.3N	6.9E	0	LO	250	N	Y	19910407	065319	246	93	20	27
152	182	LIBYA	EL ASWAD	29.0N	14.0E	28.4N	13.0E	0	NV	250	N	Y	19910407	065448	246	96	25	27
152	183	LIBYA	JABAL AS SAWDA	28.0N	15.5E	28.5N	14.7E	0	NV	250	N	Y	19910407	065514	246	97	27	27
152	184	LIBYA	NEAR CALANSCIO SAND SEA	29.5N	19.5E	28.5N	20.8E	0	LO	250	N	M	19910407	065642	247	101	33	27
152	185	LIBYA	CLOUDS-JET STREAM-DESERT	30.0N	29.0E	28.1N	28.4E	80	LO	250	N	M	19910407	065706	247	102	34	27
152	186	EGYPT	QATTARA DEPRESSION	30.0N	30.0E	28.0N	29.3E	0	LO	250	N	Y	19910407	065833	247	106	40	27
152	187	EGYPT	QATTARA DEP., NILE DELTA	30.0N	30.0E	28.0N	29.3E	0	LO	250	N	Y	19910407	065847	247	106	41	27
152	188	EGYPT	LAKE QARUN-NILE DELTA	30.0N	30.5E	27.9N	30.3E	0	LO	250	N	Y	19910407	065901	247	107	41	27
152	189	EGYPT	NILE-CAIRO	29.5N	31.0E	27.8N	30.9E	0	LO	250	N	Y	19910407	065910	247	107	42	27
152	170	EGYPT	GULF OF SUEZ-CAIRO	29.5N	32.5E	27.7N	31.9E	0	LO	250	N	Y	19910407	065925	247	108	43	27
152	171	EGYPT	SINAI PEN.-GULF OF SUEZ	29.5N	33.0E	27.6N	33.3E	0	LO	250	N	Y	19910407	065945	247	109	44	27
152	172	EGYPT	SINAI PEN.-WADI GERAIA	30.5N	34.0E	27.5N	34.0E	0	LO	250	N	Y	19910407	065956	246	109	45	27
152	173	JORDAN	DEAD SEA RIFT VALLEY	30.5N	35.5E	27.3N	34.9E	0	LO	250	N	Y	19910407	070010	246	110	46	27
152	174	RED SEA	TIP OF SINAI PEN.-TIRAN	27.5N	34.5E	27.3N	35.5E	0	NV	250	N	Y	19910407	070018	246	110	46	27
152	175	RED SEA	TIP OF SINAI PEN.-EGYPT	27.5N	34.5E	27.2N	35.9E	0	LO	250	N	Y	19910407	070025	246	111	47	27
152	176	SAUDI ARABIA	AR RAHA VOL. FIELD-TABUK	28.0N	36.5E	27.1N	36.5E	0	NV	250	N	Y	19910407	070034	246	111	47	27
152	177	SAUDI ARABIA	AR RAHA VOL. FIELD-TABUK	27.5N	37.0E	27.0N	37.0E	0	NV	250	N	Y	19910407	070041	246	111	48	27
152	178	SAUDI ARABIA	AL HUFRAH-WADI FAIR	29.0N	38.0E	26.8N	38.3E	0	LO	250	N	Y	19910407	070101	246	112	49	27
152	179	IRAQ	EUPHRATES RIVER-BAGHDAD	35.0N	42.5E	26.4N	40.6E	20	HO	250	N	N	19910407	070135	246	114	51	27
152	180	SAUDI ARABIA	AJA MNTS.-PIVOT IRRIGATI	27.5N	41.5E	26.2N	41.7E	0	LO	250	N	Y	19910407	070151	246	115	52	27
152	181	SAUDI ARABIA	SALMA MNTS.-PIVOT IRR.	27.0N	42.5E	26.1N	42.0E	0	LO	250	N	Y	19910407	070157	246	115	52	27
152	182	SAUDI ARABIA	MAZUR SAND SEA-KUWAIT SM	27.5N	44.0E	25.7N	43.9E	0	LO	250	N	Y	19910407	070225	246	117	54	27
152	183	SAUDI ARABIA	PIVOT IRR.-WADI RUMMAH	26.0N	43.5E	25.8N	44.3E	0	NV	250	N	Y	19910407	070232	246	117	55	27
152	184	KUWAIT	KUWAIT OIL WELL FIRES	29.3N	47.5E	25.4N	45.5E	0	LO	250	N	Y	19910407	070250	246	118	56	27
152	185	SAUDI ARABIA	KUWAIT OIL WELL FIRES	28.7N	47.3E	25.1N	46.7E	0	LO	250	N	Y	19910407	070308	246	119	57	27
152	186	SAUDI ARABIA	KUWAIT OIL WELL FIRES	28.5N	47.5E	25.0N	47.0E	0	LO	250	N	Y	19910407	070313	246	119	57	27
152	187	SAUDI ARABIA	KUWAIT OIL WELL FIRES	28.5N	48.0E	24.8N	48.0E	0	LO	250	N	Y	19910407	070329	246	120	58	27
152	188	IRAQ	LOOKING TOWARD PERSIAN G			24.4N	49.5E	30	HO	250	N	N	19910407	070352	246	122	60	27
152	189	SAUDI ARABIA	GULF OF BAHRAIN-BAHRAIN	25.5N	50.5E	23.9N	51.1E	45	LO	250	N	Y	19910407	070418	246	123	61	27
152	190	SAUDI ARABIA	GULF OF BAHRAIN-BAHRAIN	25.5N	50.5E	23.7N	51.8E	45	LO	250	N	Y	19910407	070429	246	124	62	27
152	191	SAUDI ARABIA	OIL FIRES-ZAWAR POINT	27.5N	49.0E	23.4N	53.0E	10	LO	250	N	N	19910407	070447	246	125	63	27
152	192	UNITED ARAB EMIRATES	MUSANDAM PENINSULA	25.0N	56.5E	22.0N	57.5E	70	LO	250	N	N	19910407	070601	246	131	67	27
152	193	OMAN	COAST-ARABIAN SEA	22.0N	59.5E	21.3N	59.6E	25	NV	250	N	Y	19910407	070634	246	134	69	27
152	194	OMAN	COAST-ARABIAN SEA	22.0N	60.0E	20.8N	60.9E	30	LO	250	N	Y	19910407	070656	246	136	71	27
152	195	OMAN	COAST-AL MASTRAH	20.0N	59.5E	20.3N	62.2E	25	LO	250	N	Y	19910407	070718	245	138	72	27
152	196	INDIA	COAST-KALINADI RIVER	15.0N	75.0E	14.8N	75.1E	5	NV	250	N	Y	19910407	071100	245	194	81	27
152	197	INDIA	TUNGABHADRA R.-DECCAN P.	14.5N	75.5E	14.5N	75.6E	15	NV	250	N	Y	19910407	071110	245	199	81	27
152	198	INDIA	TUNGABHADRA R.-DECCAN P.	14.5N	76.0E	14.3N	76.1E	20	NV	250	N	Y	19910407	071118	245	202	81	27
152	199	INDIA	VENDAVATI R.-DECCAN PLAT	14.0N	76.5E	14.1N	76.6E	20	NV	250	N	Y	19910407	071128	245	207	81	27

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	CENTER LON	MADIR LAT	MADIR LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL	OR
152	200	INDIA	RIVER-DECCAN PLAT	14.0N	77.0E	13.8N	77.1E	20	NV	250	N	Y	19910407	071137	245	211	81	27
152	201	INDIA	BANGLADORE	13.5N	77.5E	13.6N	77.6E	20	NV	250	N	Y	19910407	071145	245	215	81	27
152	202	INDIA	BANGLADORE	13.5N	78.0E	13.4N	78.0E	20	NV	250	N	Y	19910407	071153	245	218	81	27
152	203	INDIA	PALAR R.-EASTERN GHATS	13.0N	78.5E	13.1N	78.5E	20	NV	250	N	Y	19910407	071202	245	222	81	27
152	204	INDIA	PALAR R.-EASTERN GHATS	13.0N	79.0E	12.8N	79.2E	20	NV	250	N	Y	19910407	071214	245	227	81	27
152	205	INDIA	PALAR R.-COAST	12.5N	79.5E	12.5N	79.8E	35	NV	250	N	Y	19910407	071225	244	231	80	27
152	206	INDIA	PALAR R.-COAST	14.5N	80.5E	11.6N	81.5E	35	LO	250	N	Y	19910407	071256	244	241	79	27
152	207	BAY OF BENGAL	PALK ST.-INDIA SRI LANKA	10.0N	80.5E	10.5N	83.6E	35	LO	250	N	Y	19910407	071335	244	252	78	27
152	208	INDONESIA	SUMATERA-LHOKSUMAWA	5.5N	96.5E	2.7N	97.5E	80	LO	250	N	Y	19910407	071757	244	279	63	27
152	209	INDONESIA	SUMATERA-NE COAST	5.0N	98.0E	2.6N	97.7E	50	LO	250	N	Y	19910407	071801	244	279	63	27
152	210	INDONESIA	SUMATERA-NE COAST	4.5N	98.5E	2.4N	97.9E	60	LO	250	N	Y	19910407	071805	243	279	62	27
152	211	INDONESIA	SUMATERA-WEIH RIVER	4.0N	98.0E	2.3N	98.2E	80	LO	250	N	Y	19910407	071810	243	280	62	27
152	212	INDONESIA	SUMATERA-LAKE TOBA	3.0N	98.0E	2.2N	98.3E	75	NV	250	N	Y	19910407	071813	243	280	62	27
152	213	INDONESIA	SUMATERA-LAKE TOBA	3.0N	99.0E	2.0N	98.6E	75	NV	250	N	Y	19910407	071819	243	280	62	27
152	214	INDONESIA	SUMATERA-LAKE TOBA	2.0N	98.5E	1.8N	98.0E	65	NV	250	N	Y	19910407	071825	243	280	61	27
152	215	INDONESIA	NIAS ISLAND-SUNGLINT	1.5N	98.0E	1.7N	99.2E	10	LO	250	N	Y	19910407	071830	243	280	61	27
152	216	INDONESIA	TUANGKU, BANGKARU IS.	2.5N	97.5E	1.5N	99.5E	50	LO	250	N	Y	19910407	071835	243	281	61	27
152	217	INDONESIA	SUMATERA-MUSALA I-SUNGLT	2.0N	99.0E	1.4N	98.7E	50	NV	250	N	Y	19910407	071840	243	281	60	27
152	218	INDONESIA	SUMATERA-RIVER EFFLUENT	2.5N	101.0E	1.1N	100.3E	50	LO	250	N	Y	19910407	071850	243	281	60	27
152	219	INDONESIA	SUMATERA-RUPAT ISLAND	2.0N	101.5E	0.8N	100.7E	50	LO	250	N	Y	19910407	071858	243	281	59	27
152	220	INDONESIA	SUMATERA-INTERIOR-CLOUDS	0.5N	100.0E	0.5N	101.2E	70	LO	250	N	N	19910407	071908	243	282	59	27
152	221	MALAYSIA	SINGAPORE	1.5N	103.5E	0.1S	102.2E	50	LO	250	N	Y	19910407	071927	243	282	57	27
152	222	MALAYSIA	SINGAPORE-S.CHINA SEA CO	2.0N	104.0E	0.2S	102.5E	50	LO	250	N	Y	19910407	071933	243	282	57	27
152	223	INDONESIA	SUMATERA-SE PART-SED PLU	0.0	103.5E	0.5S	102.9E	50	NV	250	N	Y	19910407	071941	243	283	57	27
152	224	INDONESIA	SUMATERA-HARI R.SED PLUM	1.0S	104.0E	0.8S	103.4E	45	NV	250	N	Y	19910407	071951	243	283	56	27
152	225	INDONESIA	SUMATERA-BANGKA ISLAND	2.0S	105.0E	1.1S	103.9E	50	LO	250	N	Y	19910407	072000	243	283	55	27
152	226	INDONESIA	BANGKA ISLAND-N. PART	1.5S	105.5E	1.3S	104.4E	40	NV	250	N	Y	19910407	072009	243	283	55	27
152	227	INDONESIA	SUMATERA-BANGKA I.	2.0S	105.0E	1.7S	105.0E	55	NV	250	N	Y	19910407	072020	243	283	54	27
152	228	INDONESIA	BANGKA I.-SOUTHERN PART	2.5S	106.5E	2.0S	105.4E	50	NV	250	N	Y	19910407	072029	243	284	54	27
152	229	INDONESIA	BANGKA I.-SOUTHERN PART	3.0S	106.0E	2.3S	106.0E	50	NV	250	N	Y	19910407	072040	243	284	53	27
152	230	INDONESIA	BORNEO-CAPE PUTING	2.5S	112.0E	4.6S	110.0E	80	LO	250	N	N	19910407	072157	243	285	48	27
152	231	INDONESIA	BORNEO-LAUT ISLAND	4.0S	116.0E	6.6S	113.5E	40	LO	250	N	N	19910407	072303	243	286	44	27
152	232	ALGERIA	KAHAL TABELBALA	29.5N	3.0W	28.5N	3.4W	0	LO	250	N	N	19910407	083004	247	100	32	28
152	233	ALGERIA	NEAR KAHAL TABELBALA	28.5N	1.0W	28.4N	1.4W	0	NV	250	N	Y	19910407	083033	247	102	34	28
152	234	ALGERIA	TADEMAIT PLATEAU	29.0N	1.5E	28.3N	0.5E	0	LO	250	N	Y	19910407	083101	247	103	36	28
152	235	ALGERIA	TADEMAIT PLATEAU	28.5N	2.0E	28.3N	1.2E	0	NV	250	N	Y	19910407	083111	247	103	36	28
152	236	ALGERIA	TANEZROUFT	27.0N	2.5E	28.2N	2.7E	0	LO	250	N	Y	19910407	083132	247	104	38	28
152	237	ALGERIA	NEAR TADEMAIT PLATEAU	27.0N	4.0E	28.1N	4.2E	0	LO	250	N	Y	19910407	083155	247	105	39	28
152	238	ALGERIA	TINHERT PLAT.-ERG ORIENTL	28.0N	5.5E	28.1N	4.6E	0	NV	250	N	Y	19910407	083201	247	105	39	28
152	239	ALGERIA	ISAOUANE-N-IRARRAREN	28.0N	7.0E	27.9N	6.2E	0	NV	250	N	Y	19910407	083224	247	106	41	28

TABLE 4.3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		MADIR		CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM
				LAT	LONG	LAT	LONG										
152	240	ALGERIA	TIFERNINE DUNES	26.5N	7.0E	27.8N	7.1E	0	LO	250	N	Y	19910407	083237	247	107	42
152	241	ALGERIA	ERG BOURARHET-IN AMENAS	27.5N	9.5E	27.6N	8.6E	0	NV	250	N	Y	19910407	083300	247	108	43
152	242	LIBYA	IDHAN OF UBARI	27.5N	11.0E	27.4N	10.4E	0	NV	250	N	Y	19910407	083326	247	109	45
152	243	LIBYA	EL ASWAD	28.5N	14.0E	27.3N	11.4E	5	LO	250	N	N	19910407	083341	247	110	46
152	244	LIBYA	ZEGHER ROCKY PLAIN	27.0N	13.0E	27.2N	12.2E	0	NV	250	N	Y	19910407	083353	246	110	46
152	245	LIBYA	MARZUQ-WADI AN NASHU	26.0N	14.0E	26.9N	14.0E	0	NV	250	N	Y	19910407	083420	246	112	48
152	246	LIBYA	EL MARZUCHIA SAND DUNES	26.5N	16.0E	26.7N	15.2E	0	NV	250	N	Y	19910407	083438	246	112	48
152	247	LIBYA	BLACK HARUJ	27.5N	17.5E	26.4N	16.5E	0	NV	250	N	Y	19910407	083457	246	113	50
152	248	LIBYA	BLACK HARUJ-DUNES	26.0N	19.0E	26.2N	18.0E	0	NV	250	N	Y	19910407	083520	246	115	52
152	249	LIBYA	TIBESTI	24.0N	18.5E	25.9N	19.3E	0	LO	250	N	N	19910407	083541	246	116	53
152	250	LIBYA	MAABUS IUSEF	25.5N	21.0E	25.7N	20.3E	0	NV	250	N	N	19910407	083555	246	116	54
152	251	LIBYA	CALANCIO SAND SEA-JAWF	25.0N	22.5E	25.2N	22.1E	15	NV	250	N	N	19910407	083624	246	118	56
152	252	EGYPT	GILF KEBIR PLATEAU	23.5N	25.0E	24.6N	24.8E	0	LO	250	N	Y	19910407	083706	246	120	58
152	253	EGYPT	GREAT SAND SEA	25.0N	26.0E	24.4N	25.4E	0	NV	250	N	Y	19910407	083715	246	121	59
152	254	EGYPT	GREAT SAND SEA	25.5N	27.0E	23.9N	27.3E	5	LO	250	N	Y	19910407	083745	246	122	61
152	255	CYPRUS	MEDITERRANEAN-NILE DELTA			23.3N	29.3E	20	HO	250	N	Y	19910407	083816	246	124	63
152	256	MEDITERRANEAN SEA	NILE DELTA-CYPRUS			23.1N	30.0E	20	HO	250	N	Y	19910407	083827	246	125	63
152	257	EGYPT	LAKE MASSER	23.5N	32.0E	22.2N	32.8E	75	LO	250	N	N	19910407	083914	246	129	66
152	258	ISRAEL	NEAR COAST-DOUBLE EXPOS			21.9N	33.8E	40	LO	250	N	N	19910407	083930	246	130	67
152	259	SUDAN	NEAR COAST-DOUBLE EXPOS					20	LO	250	N	N					
152	260	SUDAN	NEAR COAST-DOUBLE EXPOS			21.2N	35.9E	20	LO	250	N	N	19910407	084004	246	133	69
152	261	SUDAN	COAST-TALLATALLA SAQIR I	19.0N	38.0E	20.3N	38.4E	10	LO	250	N	N	19910407	084045	246	137	72
152	262	SAUDI ARABIA	RED SEA COAST-SUNGLINT	20.0N	40.0E	19.9N	39.3E	10	NV	250	N	Y	19910407	084100	246	139	72
152	263	SAUDI ARABIA	HIJAZ MASSIVE-SUNGLINT	19.5N	41.0E	19.5N	40.5E	15	NV	250	N	Y	19910407	084121	245	142	74
152	264	SAUDI ARABIA	HIJAZ MASSIVE	19.0N	42.5E	18.8N	42.2E	40	NV	250	N	Y	19910407	084149	245	146	75
152	265	SAUDI ARABIA	RAMLAT YAM-NAJRAN	18.0N	45.5E	17.8N	44.6E	5	NV	250	N	N	19910407	084230	245	153	77
152	266	YEMEN (SANA)	SAB'ATAYN DUNES-MA'RIB	16.0N	46.0E	17.2N	45.9E	10	LO	250	N	N	19910407	084253	245	159	78
152	267	YEMEN (ADEN)	HADRAMAUT PLATEAU	17.0N	49.0E	16.5N	47.5E	15	LO	250	N	N	19910407	084321	245	166	79
152	268	YEMEN (ADEN)	COAST-VOLCANOS-LAVA	15.5N	51.5E	14.9N	51.0E	10	NV	250	N	N	19910407	084423	245	180	81
152	269	ARABIAN SEA	SUNGLINT			13.3N	54.2E	5	LO	250	N	N	19910407	084520	245	216	81
152	270	USA-OK	LLANO ESTACADO-PALO DURO	37.0N	100.0W	28.5N	102.7W	25	HO	250	N	N	19910407	144252	246	97	27
152	271	USA-NM	SACRAMENTO MOUNTAINS	34.0N	105.0W	28.5N	101.4W	20	HO	250	N	Y	19910407	144311	246	98	28
152	272	USA-TX	TX-NEW MEXICO-MIDLAND	33.0N	103.0W	28.5N	100.8W	10	LO	250	N	Y	19910407	144320	246	98	29
152	273	USA-TX	TX-NEW MEXICO-AMARILLO	36.0N	103.0W	28.5N	99.3W	40	HO	250	N	N	19910407	144341	246	99	30
152	274	USA-VA	EAST COAST-NC,VA,PAMLICO	37.0N	76.0W	27.2N	83.5W	10	HO	250	N	Y	19910407	144734	246	109	45
152	275	USA-VA	NC,VA,E.COAST-DOUBLE EXP			25.8N	75.7W	20	HO	250	N	Y	19910407	144931	246	114	52
152	276	USA-VA	NC,VA,E.COAST-DOUBLE EXP			25.6N	74.7W	20	HO	250	N	Y	19910407	144947	246	115	53
152	277	NEPAL	GR. HIMALAYA RANGE	28.0N	84.0E	28.2N	83.4E	25	NV	250	N	N	19910408	013517	247	91	17
152	278	CHINA	HSI-PANG MNTS., DOUBLE EX			28.3N	84.8E	25	LO	250	N	N	19910408	013537	247	92	19
152	279	CHINA	NIEN TANG KULA MT-DOU EX	30.0N	87.0E	28.4N	85.7E	5	LO	250	N	N	19910408	013551	247	92	20

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		MADIR		CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN	EL	OR
				LAT	LONG	LAT	LONG												
152	280	CHINA	HIMAL-CHINA, NEPAL-DOU EX	28.5N	88.5E	28.4N	86.5E	15	LO	250	N	N	19910408	013602	247	93	20	39	
152	281	CHINA	MU HSIN-LIN LAKE-TIBET P	28.5N	88.5E	28.5N	88.1E	50	NV	250	N	N	19910408	013625	248	94	22	39	
152	282	CHINA	LAKE NAMU-TIB PLAT-DOUEX	30.0N	90.5E	28.5N	89.4E	80	LO	250	N	N	19910408	013645	248	94	23	39	
152	283	INDIA	BRAMAPUTRA R.-DOUBLE EX			28.4N	95.7E	45	LO	250	N	N	19910408	013817	248	98	29	39	
152	284	CHINA	TA-YEN, CHENG L.-DOUB EXP	27.0N	100.0E	28.4N	97.5E	60	LO	250	N	N	19910408	013842	248	99	30	39	
152	285	CHINA	JINSHA R.-LONGJIE	26.5N	102.0E	28.1N	102.0E	5	LO	250	N	Y	19910408	013949	248	101	35	39	
152	286	CHINA	JINSHA R.-LU-NAN MNTS.	27.0N	102.5E	27.9N	104.1E	80	LO	250	N	Y	19910408	014020	248	103	37	39	
152	287	CHINA	FOLDED MOUNTAINS-CLOUDS			27.6N	106.4E	5	LO	250	N	N	19910408	014053	248	104	39	39	
152	288	CHINA	MNTS. NEAR COAST-CLOUDS			26.0N	115.9E	85	LO	250	N	N	19910408	014317	248	110	48	39	
153	0 A	NIGER	TAGAMA DESERT					15	LO	250	N	N							
153	0 B	NIGER	TAGAMA DESERT					20	LO	250	N	Y							
153	0 C	NIGERIA	AREA EAST OF SOKOTO					15	LO	250	N	Y							
153	0 D	NIGERIA	AREA EAST OF SOKOTO	13.0N	6.5E			25	LO	250	N	Y							
153	0 E	NIGERIA	DNGAIYA RIVER	12.0N	11.5E			10	LO	250	N	N							
153	0 F	NIGERIA	DNGAIYA RIVER	12.0N	11.0E			15	LO	250	N	Y							
153	0 G	NIGERIA	DNGAIYA RIVER	11.5N	10.5E			30	LO	250	N	Y							
153	0 H	NIGERIA	AREA WEST OF LAKE CHAD	13.0N	13.0E			20	LO	250	N	N							
153	0 J	CAMEROON	MANDARA MOUNTAINS	11.0N	14.0E			15	LO	250	N	N							
153	0 K	NIGERIA	MANDARA MOUNTAINS	13.0N	13.5E			20	LO	250	N	Y							
153	0 L	CAMEROON	MANDARA MOUNTAINS	10.5N	13.5E			30	LO	250	N	Y							
153	0 M	CAMEROON	MANDARA MTS., BENUE R.	9.5N	13.5E			25	LO	250	N	Y							
153	0 N	CAMEROON	MANDARA MOUNTAINS	10.5N	14.0E			25	LO	250	N	Y							
153	0 P	CAMEROON	SE OF MANDARA MTS.	10.0N	13.5E			5	LO	250	N	Y							
153	0 Q	CHAD	CHARI RIVER BASIN	10.0N	16.0E			5	LO	250	N	Y							
153	0 R	CHAD	LOGONE RIVER	10.5N	15.5E			10	LO	250	N	Y							
153	0 S	CHAD	AREA WEST OF LOGONE R.	9.5N	14.5E			45	LO	250	N	Y							
153	0 T	CHAD	CHARI RIVER BASIN	10.5N	16.5E			30	LO	250	N	N							
153	0 U	AFRICA	NEAR CHAD/CEN. AFRICA B.					50	LO	250	N	N							
153	0 V	CENTRAL AFRICAN REP.	OUHAM RIVER	8.0N	17.5E			40	LO	250	N	Y							
153	0 W	CENTRAL AFRICAN REP.	GRIHINGUI RIVER	8.5N	18.5E			30	LO	250	N	N							
153	0 X	CENTRAL AFRICAN REP.	OUHAM, BAKASSA RIVERS	7.5N	17.5E			50	LO	250	N	N							
153	0 Y	CENTRAL AFRICAN REP.	MPOKO RIVER	6.0N	17.5E			60	LO	250	N	N							
153	0 Z	CENTRAL AFRICAN REP.	LAND PATTERNS, CLOUDS					80	LO	250	N	N							
153	OAA	CENTRAL AFRICAN REP.	LAND PATTERNS, CLOUDS					80	LO	250	N	N							
153	OAB	CENTRAL AFRICAN REP.	LAND PATTERNS, CLOUDS					80	LO	250	N	N							
153	OAC	ZAIRE	MBOMOU RIVER	4.5N	24.0E			75	LO	250	N	Y							
153	OAD	ZAIRE	MBOMOU RIVER	4.5N	23.5E			75	LO	250	N	Y							
153	OAE	ZAIRE	UELE RIVER	3.5N	25.5E			65	LO	250	N	N							
153	OAF	ZAIRE	WESTERN RIFT VALLEY	1.0N	29.5E			60	LO	250	N	N							
153	OAG	ZAIRE	LAKE ALBERT, RIFT VALLEY	1.5N	30.0E			50	LO	250	N	Y							



TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	EL	OR
153	OAH	ZAIRE	LAKE ALBERT, RIFT VALLEY	2.0N 30.6E		50	LO	250	N	Y						
153	OAJ	UGANDA	LAKE ALBERT, RIFT VALLEY	3.0N 31.0E		50	LO	250	N	Y						
153	OAK	UGANDA	LAKES ALBERT, KYOGA	1.0N 31.5E		55	LO	250	N	Y						
153	OAL	UGANDA	LAKE ALBERT, RIFT VALLEY	1.0N 30.5E		60	LO	250	N	Y						
153	OAM	ZAIRE	AREA WEST OF L. ALBERT	1.0N 28.5E		80	HO	250	N	M						
153	OAN	UGANDA	LAKE KYOGA	1.5N 32.5E		55	LO	250	N	M						
153	OAP	UGANDA	LAKES KYOGA, VICTORIA	1.0N 33.0E		60	LO	250	N	Y						
153	OAQ	UGANDA	N. SHORE OF L. VICTORIA	0.0 33.0E		50	LO	250	N	Y						
153	OAR	UGANDA	AREA NW OF LAKE VICTORIA	0.0 31.0E		65	LO	250	N	Y						
153	OAS	UGANDA	AREA WNW OF L. VICTORIA	0.6S 31.0E		65	LO	250	N	Y						
153	OAT	UGANDA	N. HALF OF L. VICTORIA	1.0S 33.0E		50	LO	250	N	Y						
153	OAU	UGANDA	NE HALF OF L. VICTORIA	0.6S 33.5E		35	LO	250	N	Y						
153	OAV	KENYA	L. VICTORIA, KAVIRONDO G	0.5S 34.0E		30	LO	250	N	Y						
153	OAW	KENYA	E. HALF OF L. VICTORIA	1.0S 34.0E		55	LO	250	N	Y						
153	OAX	TANZANIA	SERENGETI PL., L. MATRON	2.6S 36.0E		15	LO	250	N	M						
153	OAY	TANZANIA	SERENGETI PL., L. MATRON	2.5S 34.5E		25	LO	250	N	Y						
153	OAZ	TANZANIA	SERENGETI, L. VICTORIA	2.0S 34.0E		60	LO	250	N	Y						
153	OBA	TANZANIA	SE HALF OF L. VICTORIA	2.0S 33.0E		70	LO	250	N	M						
153	OBB	TANZANIA	E. HALF OF L. VICTORIA	1.0S 33.0E		75	LO	250	N	M						
153	OBC	TANZANIA	L. MATRON, ELA MAIBORI C	2.5S 35.5E		20	NV	250	N	M						
153	OBD	TANZANIA	L. MATRON, SERENGETI PL.	2.5S 36.5E		25	NV	250	N	Y						
153	OBE	TANZANIA	SERENGETI PL., L. EYASI	3.0S 35.0E		45	LO	250	N	Y						
153	OBF	TANZANIA	L. MATRON, KITUMBEINE V.	2.5S 36.5E		20	NV	250	N	Y						
153	OBG	TANZANIA	L. MATRON, EYASI	3.5S 36.0E		40	NV	250	N	Y						
153	OBH	TANZANIA	L. EYASI, MANYARA	4.0N 36.0E		55	LO	250	N	Y						
153	OBJ	TANZANIA	L. EYASI, KITANGIRI	4.0S 35.0E		60	LO	250	N	Y						
153	OBK	TANZANIA	L. KITANGIRI, RIFT VAL.	4.0S 34.0E		70	LO	250	N	Y						
153	OBL	TANZANIA	L. BALANGIDA, HANANG MT.	5.0S 35.0E		75	LO	250	N	Y						
153	OBM	TANZANIA	AREA SW OF KILIMANJARO	4.5S 36.5E		70	LO	250	N	M						
153	OBN	TANZANIA	S. OF KILIMANJARO	4.0S 37.0E		50	LO	250	N	M						
153	OBP	TANZANIA	MT. MERU, L. KIKULEIWA	3.5S 37.0E		45	LO	250	N	Y						
153	OBQ	KENYA	AREA S. OF KILIMANJARO	3.5S 38.0E		40	LO	250	N	Y						
153	OBK	KENYA	L. KIKULEIWA, JIPE	3.5S 38.0E		55	LO	250	N	Y						
153	OBS	TANZANIA	L. KIKULEIWA, JIPE	4.0S 38.0E		50	LO	250	N	Y						
153	OBT	TANZANIA	SOUTH PARE MTS.	4.5S 38.0E		60	LO	250	N	Y						
153	OBV	KENYA	CITY OF MOMBASA	4.0S 39.0E		35	LO	250	N	M						
153	OBV	TANZANIA	PEMBRA IS., PEMBRA CHAN.	4.5S 38.5E		35	LO	250	N	Y						
153	OBW	TANZANIA	PEMBRA IS., USAMBARA MTS	5.0S 38.5E		35	LO	250	N	Y						
153	OBX	TANZANIA	ZANZIBAR CH., USAMBARA M	5.5S 38.5E		35	LO	250	N	Y						
153	OBV	TANZANIA	ZANZIBAR CH., USAMBARA M	6.0S 38.0E		55	LO	250	N	Y						

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	CENTER LON	MADIR LAT	MADIR LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
153	OBZ	TANZANIA	PENBA, ZANZIBAR ISLANDS	5.5S	39.5E			30	LO	250	N	Y						
153	OCA	TANZANIA	ZANZIBAR ISLAND	6.0S	39.0E			45	LO	250	N	Y						
153	OCB	TANZANIA	NEAR DAR ES SALAAM	7.0S	38.5E			70	LO	250	U	N						
153	OCC	TANZANIA	MAFIA IS., RUFJI R. DEL.	8.0S	39.5E			75	LO	250	U	N						
153	OCN	SENEGAL	DAKAR, CANARY CURRENT	15.0N	18.0W			0	LO	250	N	N						
153	OCE	SENEGAL	DAKAR, CANARY CURRENT	14.0N	18.0W			0	LO	250	N	Y						
153	OCF	SENEGAL	DAKAR, SADOUM RIVER	14.0N	17.5W			0	LO	250	N	Y						
153	OCG	GAMBIA	GAMBIA, SADOUM RIVERS	13.5N	16.5W			0	LO	250	N	Y						
153	OCH	SENEGAL	GAMBIA, CASAMANCE RIVERS	12.5N	15.5E			0	LO	250	N	Y						
153	OCJ	GUINEA BISSAU	GEBA, CASAMANCE RIVERS	12.5N	14.5W			0	LO	250	N	Y						
153	OCK	GUINEA	LOMA HILLS, TOMINE RIVER	12.0N	13.0W			0	LO	250	N	Y						
153	OCL	GUINEA	LOMA HILLS	12.0N	12.0W			0	LO	250	N	Y						
153	OCM	GUINEA	LOMA HILLS					40	LO	250	U	N						
153	1	MEXICO	BANDERAS BAY, INT. WAVES	20.5N	105.5W	21.4N	106.0W	10	LO	250	N	N	19910408	172224	247	115	61	49
153	2		BLACK			20.5N	103.5W	9					19910408	172304	247	117	63	49
153	3	MEXICO	CITY OF OAXACA	18.5N	97.5W	18.0N	97.2W	5	NV	250	N	N	19910408	172452	247	121	70	49
153	4	PANAMA	CITY OF COLON, CLOUDS	8.5N	81.0W	9.0N	78.8W	75	HO	250	N	N	19910408	173022	246	243	86	49
153	5		CLOUDS, THUNDERSTORMS			8.5N	77.9W	95	HO	250	N	N	19910408	173039	246	254	85	49
153	6	PANAMA	CANAL ZONE, COLON	9.5N	79.0W	7.3N	75.9W	70	HO	250	N	N	19910408	173118	246	269	83	49
153	7	PANAMA	CANAL ZONE, COLON	9.5N	79.5W			70	HO	250	N	N						
153	8	AUSTRALIA-NT	LAKES MACKAY, MACDONALD	23.0S	129.6E	23.4S	131.5E	15	LO	250	N	N	19910409	075055	245	285	15	58
153	9	AUSTRALIA-NT	LAKES MACKAY, MACDONALD	23.5S	129.0E	23.6S	132.2E	25	LO	250	N	Y	19910409	075108	245	285	15	58
153	10	AUSTRALIA-NT	MACDONNEL RANGES, TODD R	24.0S	133.5E			5	LO	250	N	N						
153	11	AUSTRALIA-NT	MACDONNEL R., SIMPSON D.	23.5S	135.0E	24.0S	133.7E	5	LO	250	U	Y	19910409	075129	245	284	13	58
153	12	AUSTRALIA-NT	MACDONNEL R., SIMPSON D.	24.5S	135.0E			5	LO	250	U	Y						
153	13	PACIFIC OCEAN	BLANK			28.5N	123.4W	LO	250	O	N		19910409	145918	243	88	13	63
153	14	USA-CA	LOS ANGELES, MOJAVE DES.	35.0N	116.0W	28.5N	121.5W	10	HO	250	N	N	19910409	145945	243	89	15	63
153	15	USA-NE	L. MEAD, GRAND CANYON	36.5N	115.0W	28.4N	115.2W	15	HO	250	N	N	19910409	150117	244	92	21	63
153	16	USA-AZ	YUMA, PHOENIX, PINACATE	33.0N	113.0W	28.3N	114.5W	0	LO	250	N	N	19910409	150128	244	93	21	63
153	17	USA-CO	ROCKY MTS., COLORADO PL	37.0N	107.0W	28.2N	112.1W	10	HO	250	N	N	19910409	150202	244	94	23	63
153	18	USA-UT	FOUR CORNERS REGION	37.0N	109.0W			15	HO	250	N	Y						
153	19	USA-NM	SANGRE DE CRISTO MTS.	36.0N	104.0W	28.1N	111.4W	10	HO	250	N	N	19910409	150212	244	94	24	63
153	20	USA-AZ	FOUR CORNERS, GRAND CAN.	36.0N	110.0W			15	HO	250	N	N						
153	21	USA-UT	FOUR CORNERS, PAINTED D.	37.0N	109.5W	27.8N	107.8W	15	HO	250	N	Y	19910409	150305	244	96	27	63
153	22	USA-CO	ROCKY MTS., SAN JUAN MT	38.0N	106.0W			10	HO	250	N	Y						
153	23	USA-NM	RIO GRANDE RIFT VALLEY	35.0N	106.5W	27.7N	107.0W	5	LO	250	N	Y	19910409	150318	244	96	28	63
153	24	MEXICO	SIERRA MADRE ORIENTAL	25.5N	99.5W	26.1N	97.1W	65	NV	250	N	N	19910409	150546	245	101	38	63
153	25	MEXICO	SIERRA MADRE ORIENTAL	26.5N	100.0W			70	LO	250	N	Y						
153	26	MEXICO	SIERRA MADRE ORIENTAL	28.0N	103.0W	26.0N	96.6W	35	LO	250	N	Y	19910409	150553	245	101	38	63
153	27	USA-TX	EDWARDS PL., STAKED PLA.	32.0N	102.5W			25	HO	250	N	N						

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		MADIR		CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN	EL	OR
				LAT	LO	LAT	LO												
153	28	MEXICO	MEXICAN PLATEAU	28.0N	103.0W	25.9N	96.1W	45	LO	250	N	Y	19910409	150801	245	101	39	63	
153	29	MEXICO	NEAR BROWNSVILLE	26.0N	97.0W			55	LO	250	N	N							
153	30	CUBA	BAY OF PIGS, HAVANA	23.0N	82.5W	4.9N	42.8W	60	LO	250	N	N	19910409	151008	245	108	54	63	
153	31	CUBA	BAY OF PIGS, ISLE OF PINE	22.5N	82.5W			45	LO	250	N	Y							
153	32	CUBA	CANNARREOS ARCHIEPELAGO	22.5N	80.5W	4.9N	43.0W	35	LO	250	N	Y	19910409	151023	245	108	56	63	
153	33	CUBA	CITY OF CIENFUEGOS	22.5N	81.0W			50	LO	250	N	Y							
153	34		BLACK			22.6S	9.4E						19910409	153710	245	288	21	63	
153	35		BLACK			22.8S	10.1E						19910409	153721	245	287	20	63	
153	36		BLACK			23.2S	11.4E						19910409	153743	245	287	18	63	
153	37		BLACK			23.9S	13.8E						19910409	153820	245	286	16	63	
153	38	REPUBLIC SOUTH AFRICA	MOUTH OF ORANGE RIVER	28.5S	17.0E	24.8S	17.1E	5	LO	250	N	N	19910409	153913	245	284	13	63	
153	39	NAMIBIA	KALAHARI DESERT	25.5S	19.0E	25.1S	18.7E	0	NV	250	U	N	19910409	153937	245	284	11	63	
153	40	REPUBLIC SOUTH AFRICA	GREAT KARROO, ORANGE R.	30.5S	19.5E	25.4S	19.9E	0	LO	250	N	N	19910409	153955	245	283	10	63	
153	41	REPUBLIC SOUTH AFRICA	ST. HELEN BAY, CAPE TOWN	33.0S	19.5E			20	HO	250	N	N							
153	42	BRAZIL	PARANA R., SAO SIMAO RES	19.5S	52.0W	7.5S	77.8W	25	NV	250	N	N	19910409	184039	240	293	34	65	
153	43	BRAZIL	PARANA R., SOLTEIRA IS.	20.0S	50.5W			25	LO	250	N	Y							
153	44	BRAZIL	SAO SIMAO R. PARAMAIBA R	19.0S	49.5W	7.4S	77.9W	25	LO	250	N	Y	19910409	184045	240	293	34	65	
153	45	BRAZIL	SAO SIMAO R. PARAMAIBA R	18.0S	50.0W			30	LO	250	N	Y							
153	46	BRAZIL	TIETE R., VERMELHA RES.	20.5S	50.5W	7.3S	78.2W	20	NV	250	N	Y	19910409	184054	240	293	33	65	
153	47	BRAZIL	TIETE R., RIO GRANDE	21.0S	49.0W			25	LO	250	N	Y							
153	48	BRAZIL	RIO GRANDE, LAND PATTERN	21.0S	48.0W	7.2S	78.3W	45	LO	250	N	Y	19910409	184059	240	293	33	65	
153	49	BRAZIL	PROMISSAO RES., TIETE R.	22.5S	49.0W			35	LO	250	N	Y							
153	50	BRAZIL	AREA W. OF SAO PAULA	23.0S	47.5W	7.0S	78.6W	60	LO	250	N	N	19910409	184110	240	292	32	65	
153	51	BRAZIL	PARANA, PARAMAPANEMA R.	22.5S	51.5W			45	LO	250	N	N							
153	52	BRAZIL	UBERLANDIA, AGRICULTURE	19.0S	49.0W	6.8S	78.9W	50	LO	250	U	N	19910409	184123	240	292	32	65	
153	53	BRAZIL	AG. LAND USE					70	HO	250	N	N							
153	54	BRAZIL	AG. LAND USE			6.6S	79.3W	65	HO	250	U	N	19910409	184139	240	292	31	65	
153	55	BRAZIL	PARAMAIBA RIVER	18.5S	47.0W			60	HO	250	U	N							
153	56	BRAZIL	FURNAS RES., GRANDE R.	19.5S	46.0W	6.4S	79.6W	60	LO	250	N	N	19910409	184157	240	291	29	65	
153	57	BRAZIL	FURNAS RES., GRANDE R.	21.5S	45.5W			35	LO	250	N	Y							
153	58	BRAZIL	FURNAS RES., GRANDE R.	21.0S	44.5W	6.3S	78.7W	65	LO	250	N	Y	19910409	184203	240	291	29	65	
153	59	BRAZIL	SIERRA DO ES PINHACO	19.5S	43.5W	6.1S	80.1W	50	LO	250	N	N	19910409	184228	240	291	27	65	
153	60	BRAZIL	COAST NEAR CAPE FREE	22.5S	42.5W			65	LO	250	N	N							
153	61	BRAZIL	SERRA DA MANTIQUEIRA	21.0S	43.0W	6.0S	80.3W	35	LO	250	N	N	19910409	184238	240	290	27	65	
153	62	BRAZIL	SERRA DA MANTIQUEIRA	20.5S	42.5W			25	LO	250	N	Y							
153	63	BRAZIL	SERRA DA MANTIQUEIRA	20.5S	42.0W	5.9S	80.4W	30	LO	250	N	Y	19910409	184246	240	290	26	65	
153	64	BRAZIL	PARAIBA DO SUL RIVER	21.5S	41.5W			30	LO	250	N	Y							
153	65	BRAZIL	DOCE R. MOUTH, VITORIA	20.5S	40.5W	5.8S	80.5W	30	LO	250	N	Y	19910409	184256	240	290	26	65	
153	66	BRAZIL	PARAIBA DO SUL R. MOUTH	21.5S	41.0W			15	LO	250	N	Y							
153	67	BRAZIL	PARAIBA DO SUL R. MOUTH	22.5S	41.5W	5.7S	80.6W	45	LO	250	N	Y	19910409	184305	240	290	25	65	

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		NADIR		CC	IL	FL	E	S	DATE	GMT	AL	AZ	SUN	EL	OR
				LAT	LONG	LAT	LONG												
153	68	BRAZIL	SAO TOME CAPE	22.5S	40.5W			55	LO	250	N	Y							
153	69	USA-HI	BIG IS. OF HAWAII, VOL.	20.5N	154.0W	23.4N	158.0W	75	HO	250	N	N	19910409	194852	247	104	47	66	
153	70	PERU	COAST S. OF SAN JUAN BAY	16.0S	74.5W	17.3S	76.5W	10	LO	250	N	N	19910409	201332	247	294	37	66	
153	71	PERU	ATICO, OCONA RIVERS	16.5S	74.0W			15	LO	250	N	Y							
153	72	PERU	OCONA, CARAVELI RIVERS	16.5S	73.5W	17.6S	75.7W	20	LO	250	N	Y	19910409	201346	247	294	36	66	
153	73	PERU	OCONA, CAMANA RIVERS	17.0S	73.0W	17.9S	75.0W	15	LO	250	N	Y	19910409	201358	247	294	35	66	
153	74	PERU	CAMANA, TAMBO RIVERS	17.5S	72.5W			15	LO	250	N	Y							
153	75	PERU	COAST N. OF PT. COLES	18.0S	72.5W	18.3S	74.1W	15	LO	250	N	Y	19910409	201413	247	293	34	66	
153	76	PERU	POINT COLES, DUST	18.0S	71.5W			15	LO	250	N	Y							
153	77	PERU	POINT COLES, ARICA	18.5S	71.0W	18.6S	73.2W	15	LO	250	N	Y	19910409	201429	247	293	33	66	
153	78	CHILE	ATACAMA DESERT, ARICA	19.5S	70.5W			10	LO	250	N	N							
153	79	CHILE	ATACAMA DESERT, IQUIQUE	20.0S	70.5W	18.9S	72.6W	10	LO	250	N	Y	19910409	201439	247	293	33	66	
153	80	CHILE	ATACAMA DESERT, IQUIQUE	20.0S	69.5W			10	LO	250	N	Y							
153	81	BOLIVIA	L. POOPO, UYUNI SALAR	19.5S	68.5W	19.1S	72.0W	15	LO	250	N	N	19910409	201449	247	292	32	66	
153	82	CHILE	UYUNI SALAR, ATACAMA D.	20.5S	68.5W			0	LO	250	N	Y							
153	83	CHILE	ATACAMA DES., TOCOPILLA	21.0S	69.5W	19.3S	71.6W	5	LO	250	N	Y	19910409	201458	247	292	32	66	
153	84	CHILE	ATACAMA DES., TOCOPILLA	22.0S	70.5W			15	LO	250	N	Y							
153	85	CHILE	UYUNI, ASCOTAN SALARS	21.5S	68.5W	19.5S	71.0W	0	LO	250	N	Y	19910409	201506	247	292	31	66	
153	86	CHILE	ATACAMA DES., LOA RIVER	21.5S	69.5W			0	LO	250	N	Y							
153	87	CHILE	ATACAMA DES., LOA RIVER	21.0S	70.0W	19.7S	70.4W	15	LO	250	N	Y	19910409	201515	247	292	31	66	
153	88	CHILE	ATACAMA DES., CALAMA	22.0S	69.0W	20.0S	69.8W	0	LO	250	N	Y	19910409	201526	247	292	30	66	
153	89	CHILE	ATACAMA DES., MIRAJE S.	22.5S	70.0W			10	LO	250	N	Y							
153	90	CHILE	ATACAMA D., ANTOFAGASTA	24.0S	70.5W	20.1S	69.4W	30	LO	250	N	Y	19910409	201533	247	291	29	66	
153	91	CHILE	ATACAMA, ARIZARO SALARS	24.5S	69.0W			0	LO	250	N	Y							
153	92	ARGENTINA	ARIZARO S., CENT. ANDES	25.0S	68.0W	20.3S	69.0W	5	LO	250	N	Y	19910409	201539	247	291	29	66	
153	93	ARGENTINA	ARIZARO S., CENT. ANDES	26.0S	67.0W			30	LO	250	N	Y							
153	94	ARGENTINA	CENTRAL ANDES MTS.	28.5S	67.0W	20.4S	68.7W	55	HO	250	N	Y	19910409	201545	247	291	29	66	
153	95	CHILE	PEDERNALES S., C. ANDES	27.0S	69.0W			30	HO	250	N	Y							
153	96	CHILE	PEDERNALES S., C. ANDES	27.0S	70.0W	20.5S	68.2W	30	HO	250	N	Y	19910409	201552	247	291	28	66	
153	97	CHILE	CHILE COAST, CEN. ANDES	27.5S	71.0W			40	HO	250	N	Y							
153	98	CHILE	CHILE C., CAPE BASCUNAN	31.5S	71.0W	20.8S	67.5W	65	HO	250	N	N	19910409	201605	247	291	27	66	
153	99	ARGENTINA	SALT PLAINS, CEN. ANDES	30.5S	67.5W			60	HO	250	N	N							
153	100	ARGENTINA	CENTRAL ANDES, FOOTHILLS	26.5S	66.0W	21.0S	67.0W	55	LO	250	N	N	19910409	201612	247	291	27	66	
153	101	CHILE	ATACAMA S., CEN. ANDES	23.0S	68.0W			5	LO	250	N	N							
153	102	ARGENTINA	ATACAMA S., POZUELOS L.	22.5S	66.5W	21.1S	66.6W	10	LO	250	N	Y	19910409	201619	247	290	26	66	
153	103	BOLIVIA	COLORADO LAKE, ANDES MTS	22.0S	68.0W			0	LO	250	N	Y							
153	104	BOLIVIA	COLORADO LAKE, ANDES MTS	21.5S	66.0W	21.2S	66.3W	10	LO	250	N	Y	19910409	201624	247	290	26	66	
153	105	BOLIVIA	TUMUSLA R., ANDES MTNS.	21.0S	66.0W			5	LO	250	N	Y							
153	106	BOLIVIA	TUMUSLA R., ANDES MTNS.	21.5S	65.0W	21.3S	66.0W	25	LO	250	N	Y	19910409	201629	247	290	26	66	
153	107	BOLIVIA	TUMUSLA R., ANDES MTNS.	21.5S	64.5W			45	LO	250	N	Y							

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	LONG	MADIR LAT	LONG	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL	OR
153	108	BOLIVIA	POZUELOS L. ANDES MTNS.	22.0S	64.5W	21.4S	65.7W	45	LO	250	N	Y	19910409	201634	247	290	25	66
153	109	ARGENTINA	POZUELOS L., GRAND SALAR	22.5S	65.5W			35	LO	250	N	Y						
153	110	ARGENTINA	SALTA, ANDES FOOTHILLS	25.0S	65.5W	21.7S	65.1W	50	LO	250	N	Y	19910409	201644	247	290	25	66
153	111	ARGENTINA	ANDES FOOTHILLS	27.5S	66.0W			60	LO	250	N	Y						
153	112	ARGENTINA	CHACO PL., PILCOMAYO R.	23.5S	62.0W	22.3S	63.1W	50	LO	250	O	N	19910409	201717	247	289	23	66
153	113	ARGENTINA	CHACO PLAIN, LAND USE	25.0S	62.5W	22.5S	62.4W	45	LO	250	N	N	19910409	201728	247	289	22	66
153	114	ARGENTINA	CHACO PLAIN, LAND USE	26.0S	61.0W			50	LO	250	N	Y						
153	115	ARGENTINA	CHACO PLAIN, LAND USE	28.0S	60.0W	22.7S	61.8W	50	HO	250	N	N	19910409	201737	247	288	21	66
153	116	ARGENTINA	PARANA R. N. CORRIENTES	24.5S	62.0W			40	LO	250	N	N						
153	117	ARGENTINA	TEUCO R., CHACO PLAIN															
153	118	ARGENTINA	CHACO PLAIN, LAND USE	24.5S	60.5W	22.9S	61.3W	40	LO	250	N	Y	19910409	201746	247	288	21	66
153	119	ARGENTINA	CHACO PLAIN, LAND USE	25.0S	60.5W			40	LO	250	N	Y						
153	120	PARAGUAY	PARAGUAY R., CONCEPCION	23.0S	58.5W	23.2S	60.4W	30	LO	250	N	N	19910409	201800	247	288	20	66
153	121	PARAGUAY	PARAGUAY R., ROSARIO	22.0S	58.0W			30	LO	250	N	Y						
153	122	ARGENTINA	PARAGUAY R., ASUNCION	25.0S	58.5W	23.3S	59.8W	25	LO	250	N	N	19910409	201810	247	288	19	66
153	123	ARGENTINA	PARAGUAY, PARANA RIVERS	26.0S	58.0W			15	LO	250	N	Y						
153	124	ARGENTINA	PARAGUAY, PARANA RIVERS	26.5S	57.0W	23.5S	59.2W	20	LO	250	N	Y	19910409	201819	247	287	19	66
153	125	PARAGUAY	TEBICUARY RIVER	28.0S	56.5W			35	LO	250	N	Y						
153	126	PARAGUAY	PARAGUAY R., YGUAZI R.	25.5S	56.5W	23.7S	58.6W	15	LO	250	N	N	19910409	201828	247	287	18	66
153	127	PARAGUAY	TEBICUARY RIVER	26.0S	56.5W			30	LO	250	N	Y						
153	128	PARAGUAY	PARAGUAY R. ROSARIO	24.0S	57.0W	23.8S	58.3W	10	LO	250	N	N	19910409	201834	247	287	18	66
153	129	PARAGUAY	PARAGUAY R. ROSARIO	24.5S	56.5W			10	LO	250	U	Y						
153	130	PARAGUAY	PARAGUAY R. ROSARIO	24.0S	57.0W	23.9S	57.7W	20	LO	250	U	Y	19910409	201842	247	287	17	66
153	131	PARAGUAY	PARAGUAY R. ROSARIO	24.0S	56.5W			20	LO	250	U	Y						
153	132	PARAGUAY	PARANA RIVER	24.5S	56.0W	24.0S	57.3W	20	LO	250	N	Y	19910409	201849	247	286	17	66
153	133	PARAGUAY	PARANA, YGUAZI RIVERS	25.0S	55.5W			10	LO	250	N	Y						
153	134	PARAGUAY	PARANA, YGUAZI RIVERS	25.5S	55.5W	24.2S	56.9W	15	LO	250	N	Y	19910409	201856	247	286	16	66
153	135	PARAGUAY	PARANA RIVER	26.0S	55.0W			40	LO	250	N	Y						
153	136	BRAZIL	PARANA RIVER	25.5S	54.5W	24.4S	56.0W	30	LO	250	N	Y	19910409	201909	247	286	16	66
153	137	BRAZIL	PARANA RIVER	25.0S	54.0W			15	LO	250	N	Y						
153	138	BRAZIL	PARANA RIVER, GUAIRA	24.0S	54.0W	24.5S	55.6W	15	LO	250	N	Y	19910409	201916	247	286	15	66
153	139	ARGENTINA	URUGUAY RIVER	28.0S	54.0W			55	LO	250	N	N						
153	140	ARGENTINA	PARANA RIVER	26.5S	54.0W	24.7S	54.9W	40	LO	250	U	N	19910409	201927	246	285	14	66
153	141	BRAZIL	PEPERI GUACO RIVER	26.5S	53.0W			35	LO	250	U	Y						
153	142	BRAZIL	URUGUAY RIVER	28.5S	52.5W	24.7S	54.6W	30	LO	250	U	Y	19910409	201932	246	285	14	66
153	143	BRAZIL	PARANA RIVER, GUARIA	24.0S	54.0W			15	LO	250	N	N						
153	144	BRAZIL	PIGUIRI RIVER	24.0S	53.0W	24.9S	54.0W	55	LO	250	U	Y	19910409	201941	246	285	13	66
153	145	BRAZIL	IGUACU RIVER	24.5S	53.5W			45	LO	250	U	Y						
153	146	BRAZIL	IVAI RIVER	24.0S	51.5W	25.1S	53.0W	35	LO	250	U	N	19910409	201956	246	285	13	66
153	147	BRAZIL	NEAR PONTA GROSSA	24.5S	50.0W			30	LO	250	U	Y						

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	NADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL	OR
153	148	BRAZIL	IVAI RIVER	24.5S 51.0W	26.3S 52.4W	30	LO	250	U	Y	19910409	202005	246	284	12	66
153	149	BRAZIL	NEAR PORTO UNIAO	25.6S 51.0W		30	LO	250	U	N						
153	150	BRAZIL	NEAR LAJES	27.0S 50.5W	25.4S 51.7W	25	LO	250	U	Y	19910409	202017	246	284	11	66
153	151	BRAZIL	GREAL MTNS.	28.5S 50.5W		10	LO	250	U	N						
153	152	BRAZIL	COAST S. OF CRICIUMA	29.0S 50.0W	25.6S 50.7W	10	LO	250	U	Y	19910409	202031	246	283	10	66
153	153	BRAZIL	CRICIUMA, TUBARAO	29.0S 49.0W		25	LO	250	N	Y						
153	154	BRAZIL	DOS PATOS LAKE	31.0S 50.0W	25.8S 49.9W	60	LO	250	N	N	19910409	202044	246	283	9	66
153	155	BRAZIL	COAST S. OF TUBARAO	29.5S 49.0W		30	LO	250	N	N						
153	156	BRAZIL	SAINT CATHERINE ISLAND	27.5S 48.5W	26.0S 48.9W	20	LO	250	U	N	19910409	202059	246	283	8	66
153	157	PACIFIC OCEAN	CLOUD STREAKS		2.6N 137.3W	25	LO	250	N	N	19910409	213533	247	309	81	67
153	158	PACIFIC OCEAN	CLOUD STREAKS		1.6N 135.5W	35	LO	250	N	N	19910409	213607	247	307	79	67
153	159	PACIFIC OCEAN	CLOUD STREAKS		0.5N 133.6W	20	LO	250	N	N	19910409	213843	247	305	77	67
153	160	PACIFIC OCEAN	OCEAN WAVE PATTERNS		1.2S 130.8W	30	LO	250	N	N	19910409	213738	247	303	73	67
153	161	CHINA	TIBET PLAT., NA-MU LAKE	31.0N 92.0E	27.5N 79.8E	60	HO	250	O	N	19910410	001843	245	80	-1	69
153	162	CHINA	TIBET PLAT., NA-MU LAKE	29.5N 90.0E	28.0N 83.8E	55	LO	250	N	N	19910410	001742	246	82	1	69
153	163	CHINA	HIMALAYAS, PAIKU-CO LK.	28.5N 85.5E	28.2N 86.2E	5	NV	250	N	N	19910410	001817	246	83	4	69
153	164	CHINA	HIMALAYAS, IXIXABANGMA	28.5N 85.5E	28.3N 87.3E	5	NV	250	N	Y	19910410	001834	246	84	5	69
153	165	CHINA	HIMALAYAS	28.5N 86.5E	28.3N 88.8E	5	NV	250	N	Y	19910410	001852	246	84	6	69
153	166	CHINA	HIMALAYAS	28.5N 89.0E	28.4N 89.7E	5	NV	250	N	Y	19910410	001908	246	85	7	69
153	167	CHINA	HIMALAYAS, PUMA LK.	29.0N 90.0E	28.4N 90.8E	10	NV	250	N	Y	19910410	001924	246	85	8	69
153	168	CHINA	HIMALAYAS, PUMA LK.	28.5N 91.0E	28.5N 91.7E	25	NV	250	N	Y	19910410	001938	246	86	9	69
153	169	CHINA	HIMALAYAS, BRAHMAPUTRA	29.5N 90.5E		10	LO	250	N	N						
153	170	CHINA	HIMALAYAS, BRAHMAPUTRA	29.0N 92.0E	28.5N 93.4E	5	LO	250	N	Y	19910410	002003	246	87	10	69
153	171	CHINA	TIBET PLAT., DLB. EXPOS.			50	HO	250	O	N						
153	172	CHINA	TIBET PLATEAU	34.5N 91.0E	28.5N 98.3E	60	HO	250	N	N	19910410	002113	247	89	15	69
153	173	CHINA	TIBET PLAT., DBL. EXPOS		28.4N 100.6E	60	HO	250	O	N	19910410	002147	247	90	17	69
153	174	CHINA	TIBET PLATEAU		28.4N 101.3E	70	HO	250	N	N	19910410	002158	247	90	18	69
153	175	CHINA	TIBET P., YAMZHO LAKE	30.0N 89.5E	28.3N 103.1E	40	HO	250	N	N	19910410	002224	247	91	19	69
153	176	CHINA	TIBET P., YAMZHO LAKE	29.0N 88.5E	28.2N 103.9E	40	HO	250	N	Y	19910410	002235	247	92	20	69
153	177	CHINA	FOLDED R., DBL. EXPOSURE			55	HO	250	O	N						
153	178	CHINA	FOLDED RANGES	29.5N 99.0E	28.0N 106.6E	50	HO	250	N	N	19910410	002315	247	93	23	69
153	179	CHINA	FOLDED R., DBL. EXPOSURE		18.7N 143.6E	55	HO	250	O	N	19910410	003256	248	107	60	69
153	180	VIETNAM	MHA TRANG, CAM RANH BAY	12.5N 108.5E	13.1N 108.1E	40	NV	250	N	N	19910410	034328	247	106	73	71
153	181	VIETNAM	DOUBLE EXPOSURE		12.2N 109.9E	65	LO	250	O	N	19910410	034402	247	105	75	71
153	182	SOUTH CHINA SEA	SHIP WAKE		11.6N 111.0E	10	LO	250	N	N	19910410	034422	247	105	76	71
153	183	PHILIPPINES	PALAWAN, DBL EXPOSURE	8.0N 116.0E	9.3N 115.4E	15	LO	250	O	N	19910410	034543	247	99	81	71
153	184	MALAYSIA	MARUDU BAY, CROCKER MTNS	6.5N 116.0E	8.9N 116.2E	30	LO	250	N	N	19910410	034557	247	97	82	71
153	185	SULU SEA	KAGAYAN IS., INT. WAVES	8.0N 118.0E	7.9N 118.0E	10	LO	250	N	N	19910410	034632	247	90	84	71
153	186	PHILIPPINES	MINDANAO, ILLANA BAY	6.5N 124.0E	6.2N 120.9E	25	LO	250	N	N	19910410	034727	247	57	87	71
153	187	PHILIPPINES	SULU ACHIP., SPIR. EDDIES	6.5N 121.5E	5.8N 121.7E	30	NV	250	N	N	19910410	034741	247	39	87	71

TABLE 4-3.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY ROLL AND FRAME (Concluded)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	NADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL OR
153	188		DOUBLE EXPOSURE		5.0N 123.0E	60	LO	250	N	N	19910410	034807	247	4	87 71
153	189	INDONESIA	SULAWESI, BANGKA STRAIT	2.6N 124.0E	3.8N 125.2E	26	LO	250	N	N	19910410	034849	247	332	85 71
153	190		TRIPLE EXPOSURE		1.8N 128.6E			250	O	N	19910410	034953	247	316	81 71
153	191	INDONESIA	HALMAHERA, KAU BAY	1.5N 127.5E		30	LO	250	U	N					
153	192		TRIPLE EXPOSURE		0.2S 132.1E			250	O	N	19910410	035100	247	310	77 71
153	193	INDONESIA	W. N. GUINEA, MACCLURE G	2.0S 132.5E		50	LO	250	U	N					

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL	OR
8	37		BLANK FRAME													
12	25		OVEREXPOSED	23.3S 132.3E							19910410	071216	245	290	24	73
14	1		OVEREXPOSED	24.9N 5.8E		LO			0		19910410	081517	246	100	39	74
14	16			18.3N 25.3E							19910410	082036	247	106	59	74
40	17		SUNSET TERMINATOR	27.6S 55.3W		HO	35		N		19910410	225947	243	268	-21	83
40	18		SUNSET TERMINATOR	27.6S 55.3W		HO	35		N		19910410	225948	243	268	-21	83
40	19		SUNSET TERMINATOR	27.6S 55.3W		HO	35		N		19910410	225948	243	268	-21	83
40	20		SUNSET TERMINATOR	27.6S 55.2W		HO	35		N		19910410	225949	243	268	-21	83
40	21		SUNSET TERMINATOR	27.6S 55.1W		HO	35		N		19910410	225951	243	268	-21	83
40	22		SUNSET TERMINATOR	27.6S 55.0W		HO	35		N		19910410	225952	243	268	-21	83
40	23		SUNSET TERMINATOR	27.6S 55.0W		HO	35		N		19910410	225952	243	268	-21	83
40	24		SUNSET TERMINATOR	27.6S 54.9W		HO	35		N		19910410	225953	243	268	-21	83
40	25		SUNSET TERMINATOR	27.6S 54.9W		HO	35		N		19910410	225953	243	268	-21	83
40	26		SUNSET TERMINATOR	27.6S 54.7W		HO	35		N		19910410	225957	243	268	-21	83
40	27		SUNSET TERMINATOR	27.5S 54.6W		HO	35		N		19910410	225958	243	268	-21	83
40	28		SUNSET TERMINATOR	27.5S 54.6W		HO	35		N		19910410	225958	243	268	-21	83
40	29		SUNSET TERMINATOR	27.5S 54.4W		HO	35		N		19910410	230001	243	268	-22	83
40	30		SUNSET TERMINATOR	27.5S 54.3W		HO	35		N		19910410	230002	243	268	-22	83
40	31		SUNSET TERMINATOR	27.5S 54.3W		HO	35		N		19910410	230002	243	268	-22	83
40	32		SUNSET TERMINATOR	27.4S 54.0W		HO	35		N		19910410	230007	243	268	-22	83
40	33		SUNSET TERMINATOR	26.8S 50.2W		HO	35		N		19910410	230104	243	266	-26	83
44	11		CARGO BAY	1.0N 85.0W			70	N	N		19910410	175134	248	340	83	80
45	1		CARGO BAY	11.6S 80.5E			35	O	N		19910410	083744	247	302	55	74
45	2		CARGO BAY	11.9S 81.2E			35	O	N		19910410	083758	247	302	54	74
45	3		CARGO BAY	12.2S 81.7E			35	O	N		19910410	083806	247	302	53	74
71	0 B		EXTERNAL TANK				250	N	N							
71	0 C		EXTERNAL TANK				HO	250	N	Y						
71	0 D		EXTERNAL TANK				HO	250	N	Y						
71	0 E		EXTERNAL TANK				HO	250	N	Y						
71	0 F		EXTERNAL TANK			10	HO	250	N	Y						
71	0 G		EXTERNAL TANK			20	HO	250	N	Y						
71	0 H		EXTERNAL TANK			25	HO	250	N	Y						
71	0 J		EXTERNAL TANK			25	HO	250	N	N						
71	0 K		EXTERNAL TANK			25	HO	250	N	N						
71	0 L		EXTERNAL TANK			30	HO	250	N	N						
71	0 M		EXTERNAL TANK, SPACE DEBR			HO	250	N	N							
71	0 N		EXTERNAL TANK, SPACE DEBR			HO	250	N	N							
71	0 P		MEANDERING RIVER			70	LO	250	N	Y						
71	0 Q		MEANDERING RIVER			65	LO	250	N	Y						
71	1		CARGO BAY-GRO	24.2N 137.4W			250	N	N		19910405	155204	246	88	11	2



TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	NADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
71	2		CARGO BAY-GRO		24.9N 134.7W			250	N	N	19910405	155246	246	89	14	2
71	6		BLACK		28.2N 113.7W						19910405	155802	246	102	33	2
71	18		SHUTTLE TAIL-GRO		28.2N 120.6W			250	N	N	19910405	173535	246	114	48	3
72	77		GRO-MANIPULATOR ARM		26.1N 135.1E	90	HO	100	N	Y	19910405	220753	246	91	17	6
72	78		GRO-MANIPULATOR ARM		26.3N 136.3E	90	HO	100	N	Y	19910405	220812	246	92	18	6
73	1		CARGO BAY, DARK.		22.9S 19.4W	LO	50	N	N	N	19910406	190608	243	277	0	19
73	2		BLACK		27.9S 6.6E	LO	50	N	N	N	19910406	191244	243	264	-24	19
74	21		STORM OVER TEXAS		28.4N 101.5W	100	HO	250	N	N	19910409	132529	244	85	8	62
74	22		STORM OVER TEXAS		28.5N 101.3W	100	HO	250	N	N	19910409	132532	244	86	8	62
74	23		STORM OVER TEXAS		28.5N 101.1W	100	HO	250	N	N	19910409	132535	244	86	8	62
74	24		STORM OVER TEXAS		28.5N 100.2W	100	HO	250	N	N	19910409	132547	245	86	9	62
74	25		STORM OVER TEXAS		28.5N 100.0W	100	HO	250	N	N	19910409	132550	245	86	9	62
74	26		STORM OVER TEXAS		28.5N 99.8W	100	HO	250	N	N	19910409	132553	245	86	9	62
75	68		ORB. TAIL, CLOUDS		18.3S 39.6E	100	HO	250	N	N	19910406	142219	242	281	12	16
75	69		ORB. TAIL, CLOUDS		18.4S 39.9E	100	HO	250	N	N	19910406	142226	242	281	12	16
77	7		CARGO BAY		26.9N 75.0W	LO	500	N	N	N	19910406	121001	246	91	17	15
77	8		CARGO BAY		27.1N 73.6W	LO	50	N	N	N	19910406	121022	246	92	19	15
77	9		CARGO BAY		27.3N 72.2W	LO	50	N	N	N	19910406	121043	246	93	20	15
85	19		VRY CLOUD, HAZY		6.2N 73.8W	99	LO	250	N	N	19910408	173155	246	277	81	49
85	20		VRY CLOUD, HAZY, T-STORM		4.1N 70.1W	99	LO	250	N	N	19910408	173307	245	284	76	49
85	31		CLOUDS, UNDEREXPOSED		26.3S 49.4W	100	LO	250	N	N	19910408	210007	244	278	1	51
85	32		CLOUDS, UNDEREXPOSED		26.3S 49.1W	100	LO	250	N	N	19910408	210011	244	278	0	51
85	48		CLOUDS		18.7N 46.3E	99	HO	250	N	N	19910409	072513	246	113	65	58
85	49		CLOUDS		18.0N 47.9E	99	HO	250	N	N	19910409	072540	246	114	66	58
91	74		BLACK, CENTER WHITE SPOT		22.8N 146.2E						19910405	203107	245	85	5	5
94	28		GRO PAYLOAD IN BAY			99	0	100	N	N						
94	29		GRO PAYLOAD IN BAY				0	100	N	N						
94	30		GRO PAYLOAD IN BAY				0	100	N	N						
94	31		GRO PAYLOAD IN BAY				0	100	N	N						
94	34		VIEW OF OVERHEAD WINDOW				0	100	N	N						
94	35		VIEW OF OVERHEAD WINDOW				0	100	N	N						
94	105		GRO IN PAYLOAD BAY				100	N	N							
94	106		GRO IN PAYLOAD BAY				100	N	N							
96	1		GRO PAYLOAD													
96	2		GRO PAYLOAD													
96	3		GRO PAYLOAD													
96	5		GRO PAYLOAD													
96	6		GRO PAYLOAD													
96	7		GRO PAYLOAD													
96	8		GRO PAYLOAD													

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL		FR	GEOGRAPHIC NAME	FEATURE	CENTER		NADIR		CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM
					LAT	LOW	LAT	LOW										EL OR
96	9			GRO PAYLOAD								N	N					
96	10			GRO PAYLOAD								N	N					
96	11			GRO PAYLOAD								N	N					
96	12			GRO PAYLOAD								N	N					
96	13			GRO PAYLOAD								N	N					
96	14			GRO PAYLOAD								N	N					
96	15			GRO PAYLOAD								N	N					
96	16			GRO PAYLOAD								N	N					
96	17			GRO PAYLOAD								N	N					
96	18			GRO PAYLOAD								N	N					
96	19			GRO PAYLOAD								N	N					
96	20			GRO PAYLOAD								N	N					
96	21			GRO PAYLOAD								N	N					
96	22			GRO PAYLOAD								N	N					
96	23			GRO PAYLOAD								N	N					
96	24			GRO PAYLOAD								N	N					
96	69			BLANK								N	N					
96	70			BLANK								N	N					
96	74											N	N					
97	50			CARGO BAY, EARTH LIM.			18.6N	80.1W			100	N	N	19910406	102853	245	79	-10 14
97	51			CARGO BAY, EARTH LIM.			18.8N	79.6W			100	N	N	19910406	102902	245	79	-10 14
97	52			CARGO BAY, EARTH LIM.			19.0N	79.1W			250	N	N	19910406	102910	245	79	-9 14
97	53			CARGO BAY, EARTH LIM.			19.2N	78.5W			250	N	N	19910406	102920	245	79	-8 14
97	54			CARGO BAY, EARTH LIM.			19.5W	78.0W			250	N	N	19910406	102930	245	80	-8 14
98	34			CARGO BAY			25.8S	137.1E			00	250	N	N	19910407	091001	243	274 -6 28
98	75			EARTH LIMB			27.8N	114.7W			HO	250	N	N	19910407	143956	246	90 16 32
98	81			EARTH LIMB			25.8S	41.6E			HO	250	N	N	19910407	152344	243	275 -4 32
98	96			REFLECTIVE PANEL GRO			24.6N	108.6E			LO	250	N	N	19910407	222243	245	81 -2 37
98	97			REFLECTIVE PANEL GRO			24.7N	109.1E			LO	250	N	N	19910407	222250	245	81 -2 37
98	98			REFLECTIVE PANEL GRO			24.8N	109.6E			LO	250	N	N	19910407	222259	245	81 -1 37
98	99			REFLECTIVE PANEL GRO			24.9N	110.1E			LO	250	N	N	19910407	222306	245	81 -1 37
99	1			CARGO BAY, GRO			14.2S	80.1E	0		100	N	N	19910407	103419	243	286 28 29	
99	2			CARGO BAY, GRO			16.3S	84.8E			40	N	Y	19910407	103542	243	285 23 29	
99	3			CARGO BAY, GRO			16.8S	85.8E			40	N	Y	19910407	103601	243	284 22 29	
99	4			CARGO BAY, GRO			17.3S	87.0E			40	N	Y	19910407	103621	243	284 21 29	
99	5			CARGO BAY-DARK			22.4N	91.7W			40	N	19910407	112644	245	79 -7 30		
99	6			CARGO BAY-DARK			22.6N	91.0W			40	N	19910407	112656	245	79 -6 30		
99	7			CARGO BAY-DARK			22.8N	90.3W			40	N	19910407	112706	245	80 -5 30		
99	8			CARGO BAY-DARK			23.5N	88.0W			40	N	19910407	112744	245	81 -3 30		
99	9			CARGO BAY-DARK			23.9N	86.9W			40	N	19910407	112801	245	81 -2 30		

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADTR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
99	10		CARGO BAY-DARK		24.0N 86.4W	40	N	N	19910407	112809	245	81	-1	30		
99	11		CARGO BAY-DARK		24.3N 85.3W	40	N	N	19910407	112827	245	82	-0	30		
99	12		CARGO BAY-DARK		24.8N 83.3W	40	N	N	19910407	112858	245	83	1	30		
99	13		CARGO BAY-DARK		25.0N 82.6W	40	N	N	19910407	112909	245	83	2	30		
99	14		CARGO BAY-DARK		25.1N 82.0W	40	N	N	19910407	112918	245	83	2	30		
99	15		CARGO BAY-DARK		25.5N 80.2W	40	N	N	19910407	112945	245	84	4	30		
99	16		CARGO BAY-GRO		25.8N 79.0W	40	N	N	19910407	113004	246	85	5	30		
99	17		CARGO BAY-GRO		25.9N 78.7W	40	N	N	19910407	113008	246	85	5	30		
99	18		CARGO BAY-DARK		26.0N 78.1W	40	N	N	19910407	113017	246	85	6	30		
99	19		CARGO BAY-DARK		26.7N 74.3W	40	N	N	19910407	113116	246	87	10	30		
99	20		CARGO BAY-GRO		26.9N 73.3W	40	N	N	19910407	113130	246	87	10	30		
99	21		CARGO BAY-GRO		27.7N 39.5W	40	N	N	19910407	113946	246	107	42	30		
99	22		CARGO BAY-GRO		27.6N 38.9W	40	N	N	19910407	113956	246	107	43	30		
99	23		CARGO BAY-GRO		26.9N 34.0W	40	N	N	19910407	114109	246	111	47	30		
99	24		CARGO BAY-GRO		24.2N 21.3W	40	N	N	19910407	114423	246	120	59	30		
99	25		CARGO BAY-GRO		23.9N 20.5W	40	N	N	19910407	114436	246	121	60	30		
99	26		CARGO BAY-GRO		23.8N 20.1W	40	N	N	19910407	114442	246	121	60	30		
99	29		CARGO BAY-GRO DEPLOY		17.1S 62.6E	40	N	N	19910407	120938	243	284	22	30		
99	30		CARGO BAY-GRO DEPLOY		18.2S 65.3E	40	N	N	19910407	121024	243	284	19	30		
99	31		CARGO BAY-GRO DEPLOY		18.5S 65.9E	40	N	N	19910407	121035	243	284	18	30		
99	32		CARGO BAY-GRO DEPLOY		21.1S 72.8E	40	N	N	19910407	121231	243	281	11	30		
99	33		CARGO BAY-GRO DEPLOY		21.4S 73.6E	40	N	N	19910407	121243	243	281	10	30		
99	34		GRO DEPLOY		27.7N 91.8W	40	N	N	19910407	130617	246	90	15	31		
99	35		GRO DEPLOY		27.9N 89.6W	40	N	N	19910407	130649	246	91	17	31		
99	36		GRO DEPLOY		28.0N 89.0W	40	N	N	19910407	130658	246	91	18	31		
99	37		GRO DEPLOY		28.1N 87.8W	40	N	N	19910407	130715	246	92	19	31		
99	38		GRO DEPLOY		28.4N 82.2W	40	N	N	19910407	130837	246	95	24	31		
99	49		GRO DEPLOYMENT		17.0N 25.2W	40	N	N	19910407	132321	245	154	78	31		
99	50		GRO DEPLOYMENT		16.5N 24.2W	40	N	N	19910407	132338	245	158	79	31		
99	51		GRO DEPLOYMENT		16.3N 23.7W	40	N	N	19910407	132347	245	160	79	31		
99	52		GRO DEPLOYMENT		15.8N 22.5W	40	N	N	19910407	132408	245	167	80	31		
99	53		GRO DEPLOYMENT		14.0N 18.8W	40	N	N	19910407	132513	244	194	82	31		
99	54		GRO DEPLOYMENT		13.3N 17.3W	40	N	N	19910407	132540	244	207	82	31		
99	55		GRO DEPLOYMENT		12.8N 16.4W	40	N	N	19910407	132557	244	216	82	31		
99	56		GRO DEPLOYMENT		12.6N 16.0W	40	N	N	19910407	132605	244	220	82	31		
99	57		GRO DEPLOYMENT		11.6N 13.9W	40	N	N	19910407	132642	244	236	81	31		
99	58		GRO DEPLOYMENT		11.4N 13.5W	40	N	N	19910407	132649	244	238	81	31		
99	59		GRO DEPLOYMENT		11.2N 13.2W	40	N	N	19910407	132655	244	240	81	31		
99	60		GRO DEPLOYMENT		11.0N 12.8W	40	N	N	19910407	132702	244	243	80	31		
99	61		GRO DEPLOYMENT		9.7N 10.4W	40	N	N	19910407	132748	244	255	78	31		

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
99	62		GRO DEPLOYMENT		8.7N 8.6W			40	N	N	19910407	132821	244	262	77	31
99	63		GRO DEPLOYMENT		8.3S 21.1E			40	N	N	19910407	133745	243	287	42	31
99	64		GRO DEPLOYMENT		9.0S 22.3E			40	N	N	19910407	133808	243	287	41	31
99	65		GRO DEPLOYMENT		11.5S 27.0E			40	N	N	19910407	133934	243	287	35	31
99	66		GRO DEPLOYMENT		12.0S 28.0E			40	N	N	19910407	133953	243	287	34	31
99	67		GRO DEPLOYMENT		12.3S 28.6E			40	N	N	19910407	134004	243	286	33	31
99	68		GRO DEPLOYMENT		12.7S 29.4E			40	N	N	19910407	134018	243	286	33	31
99	69		GRO DEPLOYMENT		13.1S 30.1E			40	N	N	19910407	134031	243	286	32	31
99	70		GRO DEPLOYMENT		22.4S 52.8E			40	N	N	19910407	134700	243	280	7	31
99	71		GRO DEPLOYMENT		22.7S 53.8E			40	N	N	19910407	134716	243	280	6	31
99	72		GRO DEPLOYMENT		23.4S 55.9E			40	N	N	19910407	134749	243	279	4	31
99	73		GRO DEPLOYMENT		23.8S 57.4E			40	N	N	19910407	134813	243	278	2	31
99	74		GRO DEPLOYMENT		24.2S 59.0E			40	N	N	19910407	134838	243	278	1	31
99	85		GRO DEPLOY		28.3N 94.9W		HO	40	N	N	19910407	144446	246	101	34	32
99	86		GRO DEPLOY		28.3N 94.2W		HO	40	N	N	19910407	144456	246	102	35	32
99	87		GRO DEPLOY		27.3N 84.1W		HO	40	N	N	19910407	144725	246	108	44	32
99	88		GRO DEPLOY		27.8N 112.1W			40	N	N	19910407	161948	246	105	40	33
99	91		GRO DEPLOY		27.7N 111.2W			40	N	N	19910407	162002	246	106	41	33
99	92		GRO DEPLOY		21.1N 131.0W			40	N	N	19910407	193408	245	126	67	35
99	93		GRO DEPLOY		20.6N 129.7W			40	N	N	19910407	193429	245	128	68	35
99	94		GRO DEPLOY		20.5N 129.3W			40	N	N	19910407	193435	245	128	69	35
99	95		GRO DEPLOY		20.4N 129.2W			40	N	N	19910407	193438	245	128	69	35
99	96		GRO DEPLOY		20.3N 128.7W			40	N	N	19910407	193445	245	129	69	35
99	97		GRO DEPLOY		20.2N 128.6W			40	N	N	19910407	193448	245	129	69	35
99	98		GRO DEPLOY		20.1N 128.3W			40	N	N	19910407	193452	245	129	70	35
99	99		GRO DEPLOY		18.4N 123.8W			40	N	N	19910407	193608	245	137	74	35
99	100		GRO DEPLOY		18.2N 123.5W			40	N	N	19910407	193613	245	137	74	35
99	101		GRO DEPLOY		18.2N 123.4W			40	N	N	19910407	193616	245	138	75	35
99	102		GRO DEPLOY		17.9N 122.7W			40	N	N	19910407	193628	245	139	75	35
99	103		GRO DEPLOY		27.8N 149.8E			40	N	N	19910407	205339	246	89	14	36
99	104		GRO DEPLOY		27.8N 150.6E			40	N	N	19910407	205350	246	90	15	36
99	105		GRO DEPLOY		27.9N 151.1E			40	N	N	19910407	205358	246	90	15	36
99	106		GRO DEPLOY		28.1N 153.2E			40	N	N	19910407	205429	246	91	17	36
99	107		GRO DEPLOY		28.1N 153.5E			40	N	N	19910407	205433	246	91	17	36
153	2		BLACK		20.5N 103.5W		9				19910408	172304	247	117	63	49
153	5		CLOUDS, THUNDERSTORMS		8.5N 77.9W		95	HO	250	N	19910408	173039	246	254	85	49
153	34		BLACK		22.6S 9.4E						19910409	153710	245	288	21	63
153	35		BLACK		22.8S 10.1E						19910409	153721	245	287	20	63
153	36		BLACK		23.2S 11.4E						19910409	153743	245	287	18	63
153	37		BLACK		23.9S 13.8E						19910409	153820	245	286	16	63

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	NADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL OR
153	188		DOUBLE EXPOSURE		5.0N 123.0E	60	LO	250	N	N	19910410	034807	247	4	87 71
153	190		TRIPLE EXPOSURE		1.8N 128.6E	250	O	N	N	N	19910410	034953	247	316	81 71
153	192		TRIPLE EXPOSURE		0.2S 132.1E	250	O	N	N	N	19910410	035100	247	310	77 71
77	54	AFRICA	SE COAST		6.6S 40.0E	60	HO	250	N	N	19910406	124149	242	283	38 15
77	90	AFRICA	OBLIQUE, SKELETON COAST		6.4S 15.8E	70	HO	250	N	N	19910406	141509	242	283	39 16
77	91	AFRICA	OBLIQUE, SKELETON COAST		7.0S 16.8E	60	HO	250	N	N	19910406	141529	242	283	38 16
87	2	AFRICA	COAST, CLOUDS, DARK		3.8N 3.9E	40	LO	250	N	N	19910408	121420	246	298	82 61
88	82	AFRICA	COAST, VERY DARK		13.1N 13.2W	10	LO	250	N	N	19910409	120901	246	115	77 61
88	83	AFRICA	COAST, VERY DARK		13.1N 13.0W	0	LO	250	N	N	19910409	120904	246	115	77 61
88	84	AFRICA	AGR., VERY DARK		13.0N 12.9W	15	LO	250	N	N	19910409	120907	246	115	77 61
88	85	AFRICA	AGR., VERY DARK		12.9N 12.7W	LO	250	N	N	N	19910409	120910	246	115	77 61
151	91 B	AFRICA	EGYPT-SUDAN, VERY DARK		22.7N 26.5E	0	LO	250	N	N	19910406	041815	245	84	2 10
151	242	AFRICA	ALGERIA-MAURIT-ERG IGUID		26.3N 8.7W	5	LO	250	N	N	19910406	104700	246	122	56 14
151	253	AFRICA	NIGER-CHAD-NEAR TIBESTI		19.2N 15.3E	0	LO	250	N	N	19910406	105325	245	171	76 14
152	16	AFRICA	CHAD, CAMEROON, C. AFRICA R		7.3N 15.9E	60	LO	250	N	N	19910406	123411	243	269	66 15
152	50	AFRICA	ZAIRE, ANGOLA, ZAMBIA		10.5S 23.3E	85	LO	250	N	Y	19910406	141729	242	284	30 16
152	51	AFRICA	ZAIRE, ANGOLA, ZAMBIA		11.3S 24.8E	90	LO	250	N	Y	19910406	141757	242	283	29 16
153	0	U AFRICA	NEAR CHAD/CEN. AFRICA B.		50	LO	250	N	N	N					
8	1	ALGERIA	AHAGGAR MTNS, HAZY		28.6N 0.1E	10	LO	35	N	N	19910410	063427	244	87	11 73
8	2	ALGERIA	AHAGGAR MTNS, HAZY		28.6N 0.8E	0	LO	35	N	N	19910410	063437	244	87	12 73
8	3	ALGERIA	TINRHERT PLATEAU		28.6N 1.4E	0	LO	35	N	N	19910410	063446	244	88	12 73
8	4	ALGERIA	PANORAMA, TINRHERT PLAT.		26.8N 3.5E	5	HO	35	N	N	19910410	063517	244	89	14 73
8	6	ALGERIA	TINRHERT PLAT. AREA		8.2E 10	HO	35	N	N	N	19910410	063626	244	91	19 73
8	7	ALGERIA	TINRHERT PLAT. AREA		28.3N 8.9E	40	LO	35	N	N	19910410	063636	244	91	19 73
12	36	ALGERIA	IGUIDI D., HIGH ATLAS	30.0N	5.0W 26.9N	5	LO	35	N	N	19910410	081254	245	96	30 74
12	37	ALGERIA	IGUIDI DESERT	27.0N	4.0W 26.6N	0	LO	35	N	N	19910410	081313	245	97	31 74
14	2	ALGERIA	TINRHERT PLAT., MARZUQ D	26.0N	8.0E 24.4N	15	LO	35	N	N	19910410	081548	246	101	41 74
14	3	ALGERIA	TINRHERT PLAT., MARZUQ D	23.0N	10.0E 24.2N	5	HO	35	N	N	19910410	081556	246	101	41 74
42	9	ALGERIA	GRAND ERG WEST		27.5N 6.2W	0	LO	35	N	N	19910411	073359	244	90	19 89
42	10	ALGERIA	IGUIDI DESERT	29.0N	3.0W 27.5N	0	LO	35	N	N	19910411	073406	244	91	19 89
42	11	ALGERIA	SAHARAN ATLAS MTNS.	32.0N	1.0W 27.2N	15	HO	35	N	N	19910411	073432	244	91	21 89
42	12	ALGERIA	WESTERN GRAND ERG	31.0N	3.0E 25.8N	15	HO	35	N	N	19910411	073627	245	95	28 89
42	13	ALGERIA	EASTERN GRAND ERG	30.0N	4.0E 25.8N	5	LO	35	N	N	19910411	073631	245	95	28 89
42	14	ALGERIA	EASTERN GRAND ERG	29.0N	5.0E 25.7N	4	LO	35	N	N	19910411	073637	245	95	29 89
42	15	ALGERIA	TADEMAIT PLATEAU	28.0N	6.0E 25.5N	5	LO	35	N	N	19910411	073648	245	95	30 89
42	16	ALGERIA	IRARRAREN DUNES	28.0N	7.0E 25.5N	5	LO	35	N	N	19910411	073652	245	95	30 89
42	17	ALGERIA	IRARRAREN DUNES, E. ERG	29.0N	7.0E 25.4N	5	LO	35	N	N	19910411	073658	245	95	30 89
42	18	ALGERIA	AHAGGAR MTNS.	23.0N	11.0E 24.5N	9	LO	35	N	N	19910411	073752	245	97	34 89
42	22	ALGERIA	MARZUQ DESERT	24.0N	13.0E 24.2N	0	LO	35	N	N	19910411	073807	245	97	35 89
42	23	ALGERIA	MARZUQ DESERT	24.0N	14.0E 24.2N	0	LO	35	N	N	19910411	073810	245	97	35 89

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL	OR	
42	24	ALGERIA	MARZUQ DESERT	24.0N	15.0E	24.0N	10.9E	0	LO	35	N	19910411	073820	246	97	35	89
45	29	ALGERIA	ERG CHECH, EGLAB MASSIF	24.0N	3.0W	22.1N	8.6W	0	LO	35	N	19910410	095117	246	103	48	75
72	104	ALGERIA	HAMADA DU GUIR	30.5N	3.0W	28.5N	7.5W	10	LO	100	N	19910406	090759	247	104	36	13
72	105	ALGERIA	SARAHAN ATLAS	33.0N	2.0W	28.5N	7.1W	15	HO	100	N	19910406	090805	247	104	37	13
72	106	ALGERIA	KAHAL TABELBALA	29.0N	1.0W	28.5N	5.0W	0	LO	100	N	19910406	090836	247	106	38	13
72	107	ALGERIA	ATLAS MOUNTAINS	34.0N	2.5W	28.5N	4.5W	10	LO	100	N	19910406	090843	247	106	39	13
73	74	ALGERIA	NW ALGERIA, MTNS TERRAIN			28.5N	7.3W	10	LO	250	N	19910407	082907	246	98	28	28
73	75	ALGERIA	HAMADA TOUNASSINE AREA			28.5N	6.1W	0	LO	250	N	19910407	082925	247	99	30	28
73	76	ALGERIA	HAMADA TOUNASSINE AREA			28.5N	3.0W	0	LO	250	N	19910407	083009	247	101	32	28
73	77	ALGERIA	KAHAL TABELBALA AREA	29.5N	2.3W	28.5N	2.3W	0	LO	250	N	19910407	083019	247	101	33	28
73	78	ALGERIA	MAJOR N-S TRADE ROUTE			28.4N	1.2W	0	LO	250	N	19910407	083035	247	102	34	28
73	79	ALGERIA	MAJOR N-S TRADE ROUTE			28.4N	0.9W	0	LO	250	N	19910407	083040	247	102	34	28
73	80	ALGERIA	TADEMAIT PLATEAU	27.6N	1.5E	28.3N	1.6E	0	NV	250	N	19910407	083117	247	103	37	28
73	81	ALGERIA	TADEMAIT PLATEAU			28.2N	3.3E	0	LO	250	N	19910407	083141	247	104	38	28
73	82	ALGERIA	TADEMAIT PLATEAU			28.1N	4.0E	0	LO	250	N	19910407	083151	247	105	39	28
73	83	ALGERIA	TINRHERT PLATEAU			27.9N	5.9E	0	LO	250	N	19910407	083219	247	106	41	28
73	84	ALGERIA	TINRHERT PLATEAU			27.8N	6.9E	0	LO	250	N	19910407	083235	247	107	42	28
73	85	ALGERIA	TINRHERT PLATEAU			27.8N	7.7E	0	LO	250	N	19910407	083246	247	107	42	28
85	56	ALGERIA	IGUDOI DESERT			27.0N	6.8W	0	LO	250	N	19910409	085052	246	100	34	59
85	57	ALGERIA	ERG CHECH, LONG. DUNES			26.4N	3.3W	0	LO	250	N	19910409	085145	246	101	38	59
85	58	ALGERIA	ERG CHECH, LONG. DUNES			26.2N	2.5W	0	LO	250	N	19910409	085157	246	102	39	59
85	59	ALGERIA	ERG CHECH, LONG. DUNES			26.0N	1.6W	0	LO	250	N	19910409	085211	246	102	39	59
85	60	ALGERIA	TANEZROUFT, OASIS			25.8N	0.2W	0	LO	250	N	19910409	085232	246	103	41	59
85	61	ALGERIA	AHAGGAR MTNS. HAZY			25.6N	0.7E	0	LO	250	N	19910409	085246	246	103	42	59
85	62	ALGERIA	AHAGGAR MTNS. HAZY			25.2N	2.2E	0	LO	250	N	19910409	085310	246	104	43	59
85	63	ALGERIA	AHAGGAR MTNS. HAZY			25.0N	3.1E	0	LO	250	N	19910409	085323	246	104	44	59
85	64	ALGERIA	AHAGGAR MTNS.			24.7N	4.3E	0	LO	250	N	19910409	085342	246	105	45	59
85	65	ALGERIA	AHAGGAR MTNS.			24.5N	4.9E	0	LO	250	N	19910409	085352	246	105	46	59
85	66	ALGERIA	AHAGGAR MTNS.			24.2N	6.0E	0	LO	250	N	19910409	085409	246	106	47	59
85	67	ALGERIA	TENERE DESERT AREA			23.6N	8.5E	0	LO	250	N	19910409	085448	246	107	49	59
89	97	ALGERIA	TASSILI N'AJJER-EAST END			23.0N	10.3E	0	LO	250	U	19910409	085517	246	108	51	59
91	111	ALGERIA	PIVOT IRRIG, DESERT			28.2N	1.0E	0	LO	250	N	19910406	091003	246	110	44	13
91	112	ALGERIA	TADEMAIT PLAT, IILLIA WAD	27.8N	1.8E	28.1N	1.9E	0	NV	250	N	19910406	091016	246	111	45	13
91	113	ALGERIA	DESERT, WHITE SPOTS			27.9N	4.0E	0	LO	250	N	19910406	091048	246	112	47	13
91	114	ALGERIA	DESERT, ROCK OUTCROP			27.8N	5.2E	0	LO	250	N	19910406	091105	246	113	48	13
91	115	ALGERIA	DJEBEL IRRAREM, SAND DUNE	26.5N	5.5E	27.8N	5.7E	0	LO	250	N	19910406	091113	246	114	48	13
91	116	ALGERIA	TASSILI NAJJER	26.0N	8.0E	27.4N	9.0E	0	LO	250	N	19910406	091201	246	117	51	13
92	77	ALGERIA	GRAND ERG ORIENTAL			28.1N	4.6E	0	LO	250	N	19910407	083201	247	105	39	28
92	78	ALGERIA	TINRHERT PLATEAU			27.9N	6.4E	0	LO	250	N	19910407	083227	247	107	41	28
93	56	ALGERIA	ANTI-ATLAS MTNS.	28.5N	8.0W	28.5N	5.8W	0	NV	250	N	19910406	090824	247	105	38	13

**TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)**

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
93	62	ALGERIA	RHERIS RIVER	30.5N 30.0N	4.5W 5.0W	0	LO	250	N	Y	19910406	090858	247	107	40	13
93	63	ALGERIA	ANTI-ATLAS MTNS.	30.0N	5.0W	0	LO	250	N	Y	19910406	090901	247	107	40	13
93	65	ALGERIA	ANTI-ATLAS MTNS.	29.5N	6.0W	0	LO	250	N	Y	19910406	090907	247	107	41	13
93	66	ALGERIA	TOUNASSINE ROCK DESERT	28.5N	4.5W	0	LO	250	N	Y	19910406	090915	247	108	41	13
93	67	ALGERIA	TOUNASSINE ROCK DESERT	27.5N	4.0W	0	LO	250	N	Y	19910406	090924	247	108	42	13
93	68	ALGERIA	LINEAR SAND DUNES	27.5N	3.5W	0	NV	250	N	Y	19910406	090927	247	108	42	13
93	69	ALGERIA	LINEAR SAND DUNES	28.0N	3.5W	0	NV	250	N	Y	19910406	090928	247	108	42	13
93	70	ALGERIA	LINEAR SAND DUNES	28.0N	3.0W	0	NV	250	N	Y	19910406	090931	247	108	42	13
93	71	ALGERIA	BEN TADJINE HILLS	28.5N	3.5W	0	LO	250	N	Y	19910406	090933	246	108	42	13
93	72	ALGERIA	KAHAL TABLELAND, DUNES	28.5N	2.5W	0	LO	250	N	Y	19910406	090936	246	109	42	13
93	73	ALGERIA	KAHAL TABLELAND, DUNES	28.5N	2.0W	0	LO	250	N	Y	19910406	090939	246	109	43	13
93	74	ALGERIA	KAHAL TABLELAND, DUNES	28.0N	1.5W	0	LO	250	N	Y	19910406	090942	246	109	43	13
93	75	ALGERIA	KAHAL TABLELAND, DUNES	29.0N	2.5W	0	LO	250	N	Y	19910406	090945	246	109	43	13
93	76	ALGERIA	KAHAL TABLELAND, DUNES	29.5N	2.0W	0	LO	250	N	Y	19910406	090950	246	109	43	13
93	77	ALGERIA	GRAND ERG OCCIDENTAL	29.5N	1.5W	0	LO	250	N	Y	19910406	090953	246	109	43	13
93	78	ALGERIA	GRAND ERG OCCIDENTAL	29.5N	1.0W	0	LO	250	N	Y	19910406	090956	246	110	44	13
93	79	ALGERIA	E. OF ERG CHECH, ADRAR	27.5N	0.0W	0	LO	250	N	Y	19910406	091007	246	110	44	13
93	80	ALGERIA	SOUTHERN TADEMAIT PLAT.	27.0N	1.0E	0	LO	250	N	Y	19910406	091015	246	111	45	13
93	81	ALGERIA	SOUTHERN TADEMAIT PLAT.	27.5N	1.5E	0	LO	250	N	Y	19910406	091017	246	111	45	13
93	82	ALGERIA	SOUTHERN TADEMAIT PLAT.	27.5N	1.5E	0	LO	250	N	Y	19910406	091021	246	111	45	13
93	83	ALGERIA	SOUTHERN TADEMAIT PLAT.	28.0N	1.5E	0	LO	250	N	Y	19910406	091024	246	111	45	13
93	84	ALGERIA	SOUTHERN TADEMAIT PLAT.	28.0N	2.5E	0	LO	250	N	Y	19910406	091027	246	111	45	13
93	85	ALGERIA	SOUTHERN TADEMAIT PLAT.	28.0N	3.0E	0	LO	250	N	Y	19910406	091031	246	111	46	13
93	86	ALGERIA	TADEMAIT PLATEAU	28.5N	3.0E	0	LO	250	N	Y	19910406	091033	246	112	46	13
93	87	ALGERIA	TADEMAIT PLATEAU	28.5N	2.5E	0	LO	250	N	Y	19910406	091038	246	112	46	13
93	88	ALGERIA	W. AHAGGAR MTNS.	28.0N	5.0E	0	LO	250	N	Y	19910406	091047	246	112	47	13
93	89	ALGERIA	W. AHAGGAR MTNS.	25.5N	4.5E	0	LO	250	N	Y	19910406	091050	246	112	47	13
93	90	ALGERIA	W. AHAGGAR MTNS.	25.0N	4.0E	0	LO	250	N	Y	19910406	091054	246	113	47	13
93	91	ALGERIA	TADEMAIT PLATEAU	28.0N	4.0E	0	LO	250	N	Y	19910406	091106	246	113	48	13
93	92	ALGERIA	TADEMAIT PLATEAU	28.5N	4.5E	0	LO	250	N	Y	19910406	091109	246	114	48	13
93	93	ALGERIA	TADEMAIT P., ERG ORIENT.	29.0N	4.5E	0	LO	250	N	Y	19910406	091113	246	114	48	13
93	94	ALGERIA	NW AHAGGAR MTNS.	27.5N	5.0E	0	LO	250	N	Y	19910406	091118	246	114	49	13
93	95	ALGERIA	NW AHAGGAR MTNS.	28.0N	5.5E	0	LO	250	N	Y	19910406	091121	246	114	49	13
93	96	ALGERIA	AHAGGAR MTNS., DUNES	26.0N	7.5E	0	LO	250	N	Y	19910406	091129	246	115	49	13
93	97	ALGERIA	ERG ISSAOUANE	26.5N	7.5E	0	LO	250	N	Y	19910406	091131	246	115	49	13
93	98	ALGERIA	ERG ISSAOUANE	27.0N	8.0E	0	LO	250	N	Y	19910406	091134	246	115	50	13
93	99	ALGERIA	OUARENE PLAIN	28.0N	8.5E	0	LO	250	N	Y	19910406	091138	246	115	50	13
93	100	ALGERIA	ERG ISSAOUANE	28.5N	8.0E	0	LO	250	N	Y	19910406	091141	246	115	50	13
93	101	ALGERIA	ERG ISSAOUANE	27.5N	8.0E	0	LO	250	N	Y	19910406	091145	246	116	50	13
93	102	ALGERIA	AHAGGAR MTNS.	25.5N	8.0E	0	LO	250	N	Y	19910406	091153	246	116	51	13

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
94	90	ALGERIA	ERG CHECH, KAHAL PLATEAU	28.0N	1.0W	0	LO	100	N	Y						
94	91	ALGERIA	ERG CHECH, ERG OCCIDENTAL	28.5N	1.0W	0	LO	100	N	Y						
95	22	ALGERIA	SCATTERED OASIS			0	LO	100	N	Y						
95	23	ALGERIA	DESERT			0	NV	250	N	N	19910406	104751	246	125	60	14
95	24	ALGERIA	DISSECTED PLATEAU			0	NV	250	N	N	19910406	104812	246	127	61	14
95	25	ALGERIA	DISSECTED PLATEAU			0	NV	250	N	N	19910406	104845	246	130	63	14
95	26	ALGERIA	DISSECTED PLATEAU			0	NV	250	N	N	19910406	104853	246	130	63	14
95	26	ALGERIA	AHAGGAR MTNS.	23.3N	4.8E	0	LO	250	N	N	19910406	104946	246	135	88	14
95	27	ALGERIA	AHAGGAR MTNS.	23.8N	6.5E	0	LO	250	N	N	19910406	105000	246	137	67	14
95	30	ALGERIA	TINRHERT PLATEAU	25.0N	10.0E	0	LO	250	N	N	19910406	105051	246	142	70	14
95	31	ALGERIA	TINRHERT PLATEAU	25.0N	9.0E	0	LO	250	N	N	19910406	105054	246	143	70	14
95	32	ALGERIA	TINRHERT PLATEAU	25.0N	9.0E	0	LO	250	N	N	19910406	105057	245	143	70	14
97	1	ALGERIA	TINRHERT PLATEAU	28.0N	2.0E	0	HO	250	N	N	19910406	090941	246	109	43	13
97	2	ALGERIA	GRAND ERG ORIENTAL	30.0N	7.0E	5	HO	250	N	N	19910406	090949	246	109	43	13
97	4	ALGERIA	TINRHERT PLATEAU	28.0N	4.0E	0	HO	250	N	N	19910406	091007	246	110	44	13
97	5	ALGERIA	TINRHERT PLATEAU	28.0N	5.0E	0	HO	250	N	N	19910406	091014	246	111	45	13
97	6	ALGERIA	TINRHERT PLAT., MARZUQ	26.0N	11.0E	0	HO	250	N	N	19910406	091044	246	112	47	13
97	7	ALGERIA	GRAND ERG ORIENTAL	30.5N	6.5E	0	LO	250	N	N	19910406	091102	246	113	48	13
97	63	ALGERIA	ERG IGUIDI, W. ALGERIA	26.4N	8.5W	0	LO	250	N	N	19910406	104701	246	122	56	14
97	64	ALGERIA	NW. MAURITANIA	25.6N	25.8N	0	LO	250	N	N	19910406	104737	246	124	59	14
97	65	ALGERIA	NW. MAURITANIA	25.6N	4.6W	0	LO	250	N	N	19910406	104801	246	128	60	14
97	68	ALGERIA	TANEZROUFT REGION	24.3N	24.3N	0	LO	250	N	N	19910406	104916	246	132	64	14
97	69	ALGERIA	TANEZROUFT REGION	24.1N	24.1N	0	LO	250	N	N	19910406	104930	246	133	65	14
97	70	ALGERIA	TANEZROUFT REGION	23.6N	23.6N	0	LO	250	N	N	19910406	104956	246	136	67	14
97	71	ALGERIA	TANEZROUFT REGION	23.3N	23.3N	0	LO	250	N	N	19910406	105011	246	138	67	14
98	40	ALGERIA	IGUIDI DESERT	26.6N	26.6N	0	LO	250	N	N	19910407	100812	246	112	49	29
98	41	ALGERIA	PLATEAU DU TADEMAIT	24.9N	24.9N	0	LO	250	N	N	19910407	101014	246	119	57	29
98	42	ALGERIA	PLATEAU DU TADEMAIT	24.4N	24.4N	0	LO	250	N	N	19910407	101045	246	120	59	29
98	43	ALGERIA	PLATEAU DU TADEMAIT	24.2N	24.2N	0	LO	250	N	N	19910407	101052	246	121	59	29
98	44	ALGERIA	TINRHERT PLATEAU	24.1N	24.1N	0	LO	250	N	N	19910407	101102	246	121	60	29
98	45	ALGERIA	AHAGGAR	23.8N	23.8N	0	LO	250	N	N	19910407	101116	246	122	61	29
98	46	ALGERIA	AHAGGAR	23.3N	23.3N	0	LO	250	N	N	19910407	101143	246	124	63	29
151	184	ALGERIA	OUARKIZ RIDGE	28.5N	8.5W	0	NV	250	N	N	19910406	090757	247	104	36	13
151	185	ALGERIA	TOUNASSINE ROCK DESERT			0	LO	250	N	Y	19910406	090822	247	105	38	13
151	186	ALGERIA	BEN TADJINE MOUNTAINS	28.5N	4.0W	0	NV	250	N	Y	19910406	090842	247	106	39	13
151	187	ALGERIA	TABELBALA RANGE	28.5N	3.0W	0	NV	250	N	Y	19910406	090902	247	107	40	13
151	188	ALGERIA	TABELBALA RANGE	28.5N	1.0W	0	NV	250	N	Y	19910406	090922	247	108	41	13
151	189	ALGERIA	TADEMAIT PLATEAU-ADRAR	28.5N	0.0	0	NV	250	N	Y	19910406	090941	246	109	43	13
151	190	ALGERIA	TADEMAIT PLATEAU	28.0N	1.5E	0	NV	250	N	Y	19910406	091001	246	110	44	13
151	191	ALGERIA	TADEMAIT PLATEAU	28.0N	3.0E	0	NV	250	N	Y	19910406	091021	246	111	45	13
151	192	ALGERIA	TADEMAIT PLATEAU	28.0N	4.5E	0	NV	250	N	Y	19910406	091042	246	112	46	13



TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR		
151	193	ALGERIA	TADEMAIT PLATEAU	28.0N	5.5E	27.8N	5.0E	0	NV	250	N	Y	19910406	091102	246	113	48	13
151	194	ALGERIA	TINHERT, TADEMAIT PLATEAU	27.5N	7.0E	27.7N	6.3E	0	NV	250	N	Y	19910406	091122	246	114	49	13
151	195	ALGERIA	ISAOUANE-N-IRARRAREN	27.5N	8.0E	27.5N	7.7E	0	NV	250	N	Y	19910406	091142	246	115	50	13
151	196	ALGERIA	SAHARA	27.0N	9.5E	27.3N	9.0E	0	NV	250	N	Y	19910406	091202	246	117	51	13
151	244	ALGERIA	SAFRA ROCK DESERT	25.5N	5.0W	25.3N	4.0W	0	LO	250	N	Y	19910406	104813	246	127	61	14
151	245	ALGERIA	ERG CHECH			24.6N	1.1W	0	LO	250	N	N	19910406	104857	246	130	63	14
151	246	ALGERIA	ASSEDJRAD ESCARPMENT	25.0N	1.0E	24.3N	0.3E	0	NV	250	N	Y	19910406	104919	246	132	65	14
151	247	ALGERIA	IN AFARAG SAND DUNES	23.5N	2.5E	23.4N	3.3E	0	NV	250	N	Y	19910406	105007	246	137	67	14
151	248	ALGERIA	TIDERIDJAOUINE MOUNTAIN	22.5N	2.5E	23.3N	3.7E	0	LO	250	N	Y	19910406	105014	246	138	68	14
151	249	ALGERIA	AHAGGAR MOUNTAINS	22.5N	5.0E	22.7N	5.7E	0	NV	250	N	Y	19910406	105045	246	141	69	14
151	250	ALGERIA	AHAGGAR PLATEAU	21.5N	6.5E	22.1N	7.4E	0	LO	250	N	Y	19910406	105114	245	145	71	14
151	251	ALGERIA	AHAGGAR MOUNTAINS	23.0N	7.0E	21.8N	8.2E	0	LO	250	N	Y	19910406	105127	245	147	71	14
151	252	ALGERIA	DU TAFASSASSET DESERT			20.8N	11.3E	0	LO	250	N	N	19910406	105217	245	155	74	14
152	159	ALGERIA	TADEMAIT PLATEAU	27.5N	4.0E	27.7N	4.4E	0	NV	250	N	N	19910407	065243	246	91	18	27
152	160	ALGERIA	GRAND ORIENTAL	29.0N	5.5E	27.9N	6.1E	0	NV	250	N	Y	19910407	065307	246	92	19	27
152	161	ALGERIA	GRAND ORIENTAL	29.5N	6.5E	28.0N	6.9E	0	LO	250	N	Y	19910407	065319	246	93	20	27
152	232	ALGERIA	KAHAL TABELBALA	29.5N	3.0W	28.5N	3.4W	0	LO	250	N	N	19910407	083004	247	100	32	28
152	233	ALGERIA	NEAR KAHAL TABELBALA	28.5N	1.0W	28.4N	1.4W	0	NV	250	N	Y	19910407	083033	247	102	34	28
152	234	ALGERIA	TADEMAIT PLATEAU	29.0N	1.5E	28.3N	0.5E	0	LO	250	N	Y	19910407	083101	247	103	36	28
152	235	ALGERIA	TADEMAIT PLATEAU	28.5N	2.0E	28.3N	1.2E	0	NV	250	N	Y	19910407	083111	247	103	36	28
152	236	ALGERIA	TANEZROUFT	27.0N	2.5E	28.2N	2.7E	0	LO	250	N	Y	19910407	083132	247	104	38	28
152	237	ALGERIA	NEAR TADEMAIT PLATEAU	27.0N	4.0E	28.1N	4.2E	0	LO	250	N	Y	19910407	083155	247	105	39	28
152	238	ALGERIA	TINHERT PLAT.-ERG ORIENTL	28.0N	5.5E	28.1N	4.6E	0	NV	250	N	Y	19910407	083201	247	105	39	28
152	239	ALGERIA	ISAOUANE-N-IRARRAREN	28.0N	7.0E	27.9N	6.2E	0	NV	250	N	Y	19910407	083224	247	106	41	28
152	240	ALGERIA	TIFERNINE DUNES	28.5N	7.0E	27.8N	7.1E	0	LO	250	N	Y	19910407	083237	247	107	42	28
152	241	ALGERIA	ERG BOURARHET-IN AMENAS	27.5N	9.5E	27.6N	8.6E	0	NV	250	N	Y	19910407	083300	247	108	43	28
15	7	ANGOLA	CAPRIVI STRIP	17.0S	23.0E	17.6S	21.4E	5	LO	35	N	N	19910410	132154	247	298	42	77
74	47	ANGOLA	BENGUELA AREA	12.4S	13.7E	13.4S	10.8E	50	LO	250	N	N	19910409	135725	245	296	48	62
74	48	ANGOLA	AREA S. OF BENGUELA	12.7S	13.3E	13.5S	10.9E	20	LO	250	N	N	19910409	135727	245	296	48	62
74	49	ANGOLA	SERRA DA NEVI AREA	13.4S	13.2E	13.6S	11.0E	5	LO	250	N	N	19910409	135730	245	296	48	62
74	50	ANGOLA	HUILA PLATEAU AREA	14.5S	13.0E	13.6S	11.1E	0	LO	250	N	N	19910409	135732	245	296	48	62
74	51	ANGOLA	HUILA PLATEAU AREA	14.7S	12.5E	13.7S	11.3E	0	LO	250	N	N	19910409	135734	245	296	48	62
74	52	ANGOLA	HUILA PLATEAU AREA	15.2S	12.4E	13.7S	11.4E	0	LO	250	N	N	19910409	135736	245	296	48	62
74	53	ANGOLA	PORTO ALEXANDRE AREA	15.7S	12.2E	13.8S	11.5E	0	LO	250	N	N	19910409	135738	245	296	48	62
74	54	ANGOLA	DESERT DE MOCAMEDES	16.6S	12.0E	13.9S	11.6E	0	LO	250	N	N	19910409	135741	245	296	47	62
74	58	ANGOLA	HUILA PLATEAU			15.5S	15.0E	0	LO	250	N	N	19910409	135841	244	295	43	62
74	59	ANGOLA	HUILA PLATEAU			15.5S	15.1E	0	LO	250	N	N	19910409	135843	244	295	43	62
74	60	ANGOLA	NAMIBIA BORDER	17.0S	14.7E	15.6S	15.2E	0	LO	250	N	N	19910409	135845	244	295	43	62
74	61	ANGOLA	RIO CUENE AREA	16.5S	15.3E	15.6S	15.3E	0	LO	250	N	N	19910409	135847	244	295	43	62
74	64	ANGOLA				16.7S	17.7E	0	LO	250	N	N	19910409	135928	244	294	40	62

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	NADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL	OR	
74	66	ANGOLA	SE ANGOLA	17.0S	18.4E	5	LO	250	N	N	19910409	135941	244	294	40	62	
74	67	ANGOLA	SE ANGOLA	17.6S	19.8E	5	LO	250	N	N	19910409	140005	244	294	38	62	
74	68	ANGOLA	SE ANGOLA	17.7S	20.1E	0	LO	250	N	N	19910409	140010	244	293	38	62	
75	48	ANGOLA	VIEW ALONG SW COAST AFRC	6.3S	15.5E	90	HO	250	N	N	19910406	141504	242	283	39	16	
75	49	ANGOLA	VIEW ALONG SW COAST AFRC	6.8S	16.0E	90	HO	250	N	N	19910406	141513	242	283	39	16	
75	50	ANGOLA	VRY CLDY	6.8S	16.5E	95	LO	250	N	N	19910406	141522	242	283	38	16	
75	51	ANGOLA	VRY CLDY	8.6S	19.6E	95	LO	250	N	N	19910406	141621	242	284	35	16	
77	92	ANGOLA	ZAMBEZI RIVER BASIN	8.4S	19.4E	70	LO	250	N	N	19910406	141616	242	284	35	16	
77	93	ANGOLA	ZAMBEZI RIVER BASIN	8.8S	20.0E	90	LO	250	N	N	19910406	141628	242	284	34	16	
77	94	ANGOLA	ZAMBEZI RIVER BASIN	9.7S	21.7E	80	LO	250	N	N	19910406	141700	242	284	32	16	
77	95	ANGOLA	ZAMBEZI RIVER BASIN	10.2S	22.6E	70	LO	250	N	N	19910406	141717	242	284	31	16	
80	73	ANGOLA	MOUTH OF CONGO RIVER	6.0S	13.0E	40	HO	250	N	N	19910409	121831	246	298	66	61	
80	92	ANGOLA	ETOSHA PAN	17.0S	19.0E	15	HO	250	N	N	19910409	122117	246	297	55	61	
80	93	ANGOLA	LIUWA PLAIN	17.0S	22.0E	15	HO	250	N	N	19910409	122158	245	296	52	61	
83	37	ANGOLA	ETOSHA PAN, RIO CUBANGO	17.5S	19.0E	40	HO	100	N	N	19910409	122145	246	296	53	61	
83	44	ANGOLA	COAST, ETOSHA PAN-NAMIBI	14.0S	14.0E	10.3S	4.7E	30	HO	100	N	19910409	135535	245	297	52	62
83	45	ANGOLA	COAST, ETOSHA PAN-NAMIBI	17.0S	15.0E	10.4S	4.9E	10	HO	100	N	19910409	135538	245	297	52	62
83	87	ANGOLA	NE PANORAMA, R. CUBANGO	16.5S	19.5E	24.5S	16.2E	15	HO	100	N	19910409	153859	245	285	14	63
87	79	ANGOLA	COAST, LOBITO, DARK	12.5S	13.5E	12.7S	9.3E	15	LO	250	U	19910409	135658	245	296	47	62
87	80	ANGOLA	COAST, DARK	13.0S	13.3E	12.7S	9.4E	5	LO	250	U	19910409	135700	245	296	47	62
87	81	ANGOLA	INTERIOR, DARK	12.8S	9.5E	0	LO	250	U	N	19910409	135703	245	296	46	62	
87	82	ANGOLA	INTERIOR	14.5S	12.5E	12.9S	9.7E	0	LO	250	N	19910409	135706	245	295	46	62
87	83	ANGOLA	COAST, MOCAMEDES	15.0S	12.5E	13.0S	9.9E	0	LO	250	N	19910409	135710	245	295	46	62
87	84	ANGOLA	COAST, RIO COROCA,	15.8S	12.3E	13.1S	10.0E	0	LO	250	N	19910409	135712	245	295	46	62
87	89	ANGOLA	INTERIOR, DARK	15.1S	14.2E	0	LO	250	U	N	19910409	135827	244	294	41	62	
87	91	ANGOLA	INTERIOR, DARK	15.4S	14.9E	20	LO	250	U	N	19910409	135840	244	294	40	62	
87	92	ANGOLA	INTERIOR, DARK	16.1S	16.4E	30	LO	250	U	N	19910409	135905	244	294	39	62	
87	93	ANGOLA	INTERIOR, DARK	16.2S	16.6E	0	LO	250	U	N	19910409	135909	244	294	38	62	
90	64	ANGOLA	CABINDE, AFLD, COAST	5.5S	12.5E	3.2S	10.1E	75	LO	250	N	19910406	141321	242	282	46	16
90	67	ANGOLA	DOS TIGRES I, NAMIB DES.	17.0S	12.0E	8.2S	18.9E	50	HO	250	N	19910406	141608	242	284	35	16
90	68	ANGOLA	RIO CUANGO/HILLS	10.0S	18.5E	8.5S	19.6E	70	LO	250	U	19910406	141620	242	284	35	16
90	69	ANGOLA	STREAMS, HILLS	9.0S	20.4E	70	LO	250	N	N	19910406	141636	242	284	34	16	
90	70	ANGOLA	RIO CUANDO, ZAMBEZI DRAIN	15.0S	21.0E	10.3S	22.8E	80	LO	250	U	19910406	141720	242	284	31	16
90	92	ANGOLA	MOCAMEDES DES, RIO COROCA	15.8S	12.0E	18.8S	16.9E	60	LO	250	N	19910406	155606	243	281	11	17
90	93	ANGOLA	MOCAMEDES DESERT, COAST	17.0S	12.0E	18.9S	17.2E	40	LO	250	N	19910406	155611	243	280	11	17
152	48	ANGOLA	ANGOLA, NAMIBIA COAST	5.9S	14.8E	40	HO	250	N	N	19910406	141451	242	283	40	16	
152	49	ANGOLA	COAST-ANGOLA & NAMIBIA	13.5S	12.5E	6.6S	16.1E	50	HO	250	N	19910406	141515	242	283	39	16
12	14	ARABIAN SEA	OMAN COAST, MASIRAH IS.	18.0N	58.0E	16.2N	54.0E	10	HO	35	N	19910410	064832	247	107	65	73
41	9	ARABIAN SEA	OIL SLICKS	13.1N	62.4E	15	LO	35	N	N	19910411	061240	247	99	65	88	
41	10	ARABIAN SEA	OIL SLICKS	12.8N	63.0E	10	LO	35	N	N	19910411	061251	247	98	66	88	

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	LOW	MADIR LAT	LOW	CC	TL	FL	E	S	DATE	GMT	AL	AZ	EL	OR
85	53	ARABIAN SEA	SHIP WAKE OIL SLICK	14.8N	55.0E	14.8N	55.0E	0	LO	250	N	N	19910409	072745	246	117	74	58
85	54	ARABIAN SEA	SUNGLINT, CLOUDS	13.5N	57.8E	13.5N	57.8E	40	LO	250	N	N	19910409	072835	246	119	78	58
85	55	ARABIAN SEA	SUNGLINT, CLOUDS	12.9N	58.9E	12.9N	58.9E	20	LO	250	N	N	19910409	072856	246	119	79	58
93	25	ARABIAN SEA	CLOUDS OFF C. OF INDIA	20.8N	68.9E	20.8N	68.9E	80	LO	250	U	N	19910408	010952	245	82	-1	8
94	63	ARABIAN SEA	DYING THUNDERSTORM					HO	100	N	N							
151	174	ARABIAN SEA	SUNGLINT-EDDIES-SHIP WAK	19.4N	62.5E	19.4N	62.5E	5	LO	250	N	Y	19910406	074623	245	173	76	12
151	175	ARABIAN SEA	SUNGLINT-EDDIES	18.5N	64.9E	18.5N	64.9E	0	LO	250	N	Y	19910406	074703	245	184	77	12
151	176	ARABIAN SEA	SUNGLINT-LINEAR LINES	18.1N	65.8E	18.1N	65.8E	0	LO	250	N	Y	19910406	074718	245	189	78	12
151	177	ARABIAN SEA	SUNGLINT	17.6N	67.1E	17.6N	67.1E	0	LO	250	N	Y	19910406	074741	245	198	78	12
151	178	ARABIAN SEA	SUNGLINT-SULOY?	17.2N	67.8E	17.2N	67.8E	0	LO	250	N	Y	19910406	074754	245	200	78	12
151	179	ARABIAN SEA	SUNGLINT-EDDIES-SURFACTA	16.3N	69.9E	16.3N	69.9E	5	LO	250	N	N	19910406	074830	244	212	78	12
151	180	ARABIAN SEA	SUNGLINT-EDDIES	14.9N	72.9E	14.9N	72.9E	15	LO	250	N	N	19910406	074923	244	228	77	12
152	269	ARABIAN SEA	SUNGLINT	13.3N	54.2E	13.3N	54.2E	5	LO	250	N	N	19910407	084520	245	216	81	28
10	16	ARGENTINA	PILCOMAYO RIVER	21.7S	63.6W	21.7S	63.6W	80	LO	35	N	N	19910410	193847	247	295	32	81
39	23	ARGENTINA	ANDES, ARIZARO SALAR	25.0S	68.0W	25.0S	68.0W	5	LO	35	N	N	19910410	211658	246	287	15	82
39	24	ARGENTINA	ANDES, ANTOFALLA SALAR	26.0S	68.0W	26.0S	68.0W	10	LO	35	N	N	19910410	211659	246	287	14	82
39	25	ARGENTINA	ANDES, ANTOFALLA SALAR	27.0S	68.0W	27.0S	68.0W	15	LO	35	N	N	19910410	211700	246	287	14	82
39	26	ARGENTINA	ANDES, HOMBRE MUERTO SAL	26.0S	67.0W	26.0S	67.0W	25	LO	35	N	N	19910410	211702	246	287	14	82
39	27	ARGENTINA	ANDES, ARIZARO SALAR	26.0S	67.0W	26.0S	67.0W	20	LO	35	N	N	19910410	211715	246	286	13	82
39	28	ARGENTINA	ANDES MTNS.	27.0S	67.0W	27.0S	67.0W	50	LO	35	N	N	19910410	211727	246	286	13	82
39	29	ARGENTINA	ANDES MTNS.	26.0S	67.0W	26.0S	67.0W	45	LO	35	N	N	19910410	211729	246	286	13	82
39	30	ARGENTINA	ANDES MTNS.	27.0S	68.0W	27.0S	68.0W	35	LO	35	N	N	19910410	211736	246	286	12	82
39	31	ARGENTINA	ANDES MTNS.	26.0S	68.0W	27.0S	67.0W	55	LO	35	N	N	19910410	211737	246	286	12	82
39	32	ARGENTINA	ANDES MTNS.	26.0S	67.0W	27.0S	66.9W	50	LO	35	N	N	19910410	211738	246	285	12	82
39	33	ARGENTINA	VIEW WEST OF ANDES MTNS.	25.0S	68.0W	27.4S	64.4W	50	HO	35	N	N	19910410	211816	246	284	10	82
39	34	ARGENTINA	VIEW WEST OF ANDES MTNS.	27.0S	68.0W	27.6S	62.5W	55	HO	35	N	N	19910410	211843	245	283	8	82
39	35	ARGENTINA	VIEW WEST OF ANDES MTNS.	25.0S	67.0W	27.8S	61.3W	65	HO	35	N	N	19910410	211901	245	283	7	82
39	36	ARGENTINA	CLOUDS, SUNSET	28.6S	50.3W	28.6S	50.3W	75	HO	35	N	N	19910410	212142	245	277	-4	82
39	37	ARGENTINA	CLOUDS, SUNSET	28.6S	47.2W	28.6S	47.2W	75	HO	35	N	N	19910410	212228	244	276	-7	82
85	30	ARGENTINA	MTNS. BORDER W/BOLIVIA	23.2S	62.1W	23.2S	62.1W	50	LO	250	N	N	19910408	205649	245	284	13	51
93	18	ARGENTINA	PILCOMAYO RIVER	22.0S	61.0W	16.7S	61.6W	30	LO	250	U	N	19910405	211325	243	280	11	5
93	19	ARGENTINA	CENTRAL ANDES HIGHLANDS	17.4S	59.8W	17.4S	59.8W	40	HO	250	N	N	19910405	211355	243	279	9	5
96	62	ARGENTINA	NEAR POZUELOS LAGOON	23.5S	66.0W			50	LO	100	N	Y						
96	63	ARGENTINA	NEAR POZUELOS LAGOON	22.5S	65.5W			45	LO	100	N	Y						
96	64	ARGENTINA	CHACO PLAIN, LAND USE					30	LO	100	U	N						
96	65	ARGENTINA	CHACO PLAIN, LAND USE					30	LO	100	U	Y						
96	66	ARGENTINA	CHACO PLAIN, LAND USE					35	LO	100	U	Y						
153	92	ARGENTINA	ARIZARO S., CENT. ANDES	25.0S	68.0W	20.3S	69.0W	5	LO	250	N	Y	19910409	201539	247	291	29	66
153	93	ARGENTINA	ARIZARO S., CENT. ANDES	26.0S	67.0W			30	LO	250	N	Y						
153	94	ARGENTINA	CENTRAL ANDES MTNS.	28.5S	67.0W	20.4S	68.7W	55	HO	250	N	Y	19910409	201545	247	291	29	66

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		MADIR		CC	IL	FL	E	S	DATE	GMT	AL	AZ	SUN	EL	OR
				LAT	LONG	LAT	LONG												
153	99	ARGENTINA	SALT PLAINS, CEN. ANDES	30.5S	67.5W			60	HO	250	N	N	19910409	201612	247	291	27	66	
153	100	ARGENTINA	CENTRAL ANDES, FOOTHILLS	26.5S	66.0W	21.0S	67.0W	55	LO	250	N	N	19910409	201619	247	290	26	66	
153	102	ARGENTINA	ATACAMA S., POZUELOS L.	22.5S	66.5W	21.1S	66.6W	10	LO	250	N	Y	19910409	201619	247	290	26	66	
153	109	ARGENTINA	POZUELOS L., GRAND SALAR	22.5S	65.5W			35	LO	250	N	Y							
153	110	ARGENTINA	SALTA, ANDES FOOTHILLS	25.0S	65.5W	21.7S	65.1W	50	LO	250	N	Y	19910409	201644	247	290	25	66	
153	111	ARGENTINA	ANDES FOOTHILLS	27.5S	66.0W			60	LO	250	N	Y							
153	112	ARGENTINA	CHACO PL., PILCOMAYO R.	23.5S	62.0W	22.3S	63.1W	50	LO	250	O	N	19910409	201717	247	289	23	66	
153	113	ARGENTINA	CHACO PLAIN, LAND USE					50	LO	250	N	N							
153	114	ARGENTINA	CHACO PLAIN, LAND USE	25.0S	62.5W	22.5S	62.4W	45	LO	250	N	N	19910409	201728	247	289	22	66	
153	115	ARGENTINA	CHACO PLAIN, LAND USE	26.0S	61.0W			50	LO	250	N	Y							
153	116	ARGENTINA	PARANA R. N. CORRIENTES	28.0S	60.0W	22.7S	61.8W	50	HO	250	N	N	19910409	201737	247	288	21	66	
153	117	ARGENTINA	TEUCO R., CHACO PLAIN	24.5S	62.0W			40	LO	250	N	N							
153	118	ARGENTINA	CHACO PLAIN, LAND USE	24.5S	60.5W	22.9S	61.3W	40	LO	250	N	Y	19910409	201746	247	288	21	66	
153	119	ARGENTINA	CHACO PLAIN, LAND USE	25.0S	60.5W			40	LO	250	N	Y							
153	122	ARGENTINA	PARAGUAY R., ASUNCION	25.0S	58.5W	23.3S	59.8W	25	LO	250	N	N	19910409	201810	247	288	19	66	
153	123	ARGENTINA	PARAGUAY, PARANA RIVERS	26.0S	58.0W			15	LO	250	N	Y							
153	124	ARGENTINA	PARAGUAY, PARANA RIVERS	26.5S	57.0W	23.5S	59.2W	20	LO	250	N	Y	19910409	201819	247	287	19	66	
153	139	ARGENTINA	URUGUAY RIVER	28.0S	54.0W			55	LO	250	N	N							
153	140	ARGENTINA	PARANA RIVER	26.5S	54.0W	24.7S	54.9W	40	LO	250	U	N	19910409	201927	246	285	14	66	
72	80	ASIA	LARGE STORM CELLS	26.5S	54.0W	25.1N	83.1E	95	HO	100	O	N	19910406	011341	246	88	12	8	
10	26	ATLANTIC OCEAN	SUNGLINT, CLOUDS			28.1S	33.7W	45	HO	35	N	N	19910410	194628	245	281	3	81	
10	27	ATLANTIC OCEAN	SUNGLINT, CLOUDS			28.6S	26.1W	40	HO	35	N	N	19910410	194818	245	277	-4	81	
15	1	ATLANTIC OCEAN	UNIQUE CLOUD FORMATION			12.2N	33.2W	95	LO	35	N	N	19910410	130455	247	102	72	77	
71	75	ATLANTIC OCEAN	AMAZON R., OCEAN INTERFAC			2.2N	48.8W	20	LO	250	N	N	19910405	175541	243	276	50	3	
75	1	ATLANTIC OCEAN	LG STORM, CLOUD FORMATION			28.5N	59.0W	90	HO	250	N	N	19910406	121358	246	101	32	15	
75	2	ATLANTIC OCEAN	LG STORM, CLOUD FORMATION			28.5N	58.2W	90	LO	250	N	N	19910406	121409	247	101	33	15	
79	102	ATLANTIC OCEAN	GRO PAYLOAD, EARTH LIMB			18.5S	31.4W	70	HO	250	N	N	19910406	190248	243	281	13	19	
79	103	ATLANTIC OCEAN	GRO PAYLOAD, EARTH LIMB			18.9S	30.6W	75	HO	250	N	N	19910406	190303	243	281	12	19	
81	79	ATLANTIC OCEAN	THUNDERSTORMS			17.5S	35.8W	90	NV	250	N	N	19910405	194031	243	279	8	4	
81	80	ATLANTIC OCEAN	THUNDERSTORMS			17.6S	35.5W	75	NV	250	U	N	19910405	194036	243	279	8	4	
81	81	ATLANTIC OCEAN	EARTH LIMB			19.5S	31.0W	50	HO	250	U	N	19910405	194153	243	277	3	4	
83	2	ATLANTIC OCEAN	CLOUD EDDIES, SWIRLS			24.1N	17.5W	100	LO	100	N	Y	19910409	102740	246	106	47	60	
83	3	ATLANTIC OCEAN	CLOUD EDDIES, SWIRLS			23.9N	16.7W	80	LO	100	N	Y	19910409	102752	246	106	48	60	
83	33	ATLANTIC OCEAN	CLOSED CONVECTION CELLS			21.8N	33.6W	95	LO	100	N	N	19910409	120310	246	108	54	61	
96	43	ATLANTIC OCEAN	PAYLOAD BAY					35	HO	100	N	N							
96	44	ATLANTIC OCEAN	PAYLOAD BAY					35	HO	100	N	N							
97	107	ATLANTIC OCEAN	CLOUDS			28.0N	66.7W	70	LO	250	N	N	19910406	121205	246	96	25	15	
151	89	ATLANTIC OCEAN	CLOUDS			16.5S	38.2W	95	LO	250	N	N	19910405	193950	243	280	11	4	
151	238	ATLANTIC OCEAN	LAYERED CLOUDS			27.9N	19.7W	95	LO	250	N	N	19910406	104417	246	112	47	14	
9	20	ATMOSPHERIC LIMB	CLOUDS			26.0N	21.3W	99	HO	35	N	N	19910411	090940	245	94	27	90	

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	CENTER LONG	MADIR LAT	MADIR LONG	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL	OR
85	45	ATMOSPHERIC LING				20.9N	51.1E	LO	250	N	N	N	19910409	004822	242	72	-22	54
85	46	ATMOSPHERIC LING				21.1N	51.4E	LO	250	N	N	N	19910409	004828	242	72	-21	54
85	47	ATMOSPHERIC LING				21.1N	51.6E	LO	250	N	N	N	19910409	004831	242	72	-21	54
92	100	ATMOSPHERIC LING	VRY DARK, UNDEREXPOSED			26.4S	39.8E	30	HO	250	N	N	19910407	152317	243	276	-3	32
94	68	AUSTRALIA	WEST C., 80-MILE BEACH	19.0S	122.0E			60	HO	100	U	N						
94	69	AUSTRALIA	COAST, 80-MILE BEACH	20.0S	120.0E			55	HO	100	U	N						
94	70	AUSTRALIA	GREAT SANDY DESERT					65	HO	100	U	N						
94	83	AUSTRALIA	L. DISAPPOINTMENT	23.0S	123.0E			5	LO	100	N	Y						
94	84	AUSTRALIA	GREAT SANDY/GIBSON DES.	22.0S	124.0E			20	LO	100	N	Y						
94	85	AUSTRALIA	GREAT SANDY/GIBSON DES.	21.5S	124.5E			35	LO	100	N	Y						
94	86	AUSTRALIA	W. COAST, 80-MILE BEACH	20.0S	119.0E			25	HO	100	O	N						
94	87	AUSTRALIA	W. COAST, 80-MILE BEACH	20.0S	120.0E			20	HO	100	N	N						
94	88	AUSTRALIA	L. MACKAY, GIBSON DESERT	22.5S	128.5E			55	LO	100	U	N						
73	55	AUSTRALIA-NT	LAKE WOODS	18.0S	132.0E	16.9S	133.7E	20	NV	250	N	N	19910407	072911	243	284	21	27
73	56	AUSTRALIA-NT	LAKE WOODS	18.0S	134.0E	17.0S	133.9E	30	NV	250	N	N	19910407	072915	243	284	20	27
73	57	AUSTRALIA-NT		18.5S	134.5E	17.4S	134.9E	60	NV	250	N	N	19910407	072931	243	284	19	27
73	58	AUSTRALIA-NT	EDWARD PELLEW GROUP ISLS	16.0S	137.2E	18.5S	137.4E	20	LO	250	N	N	19910407	073015	243	283	17	27
73	59	AUSTRALIA-NT	COAST, SE. OF VANDERLIN	16.5S	138.0E	18.6S	137.7E	20	LO	250	N	N	19910407	073019	243	283	16	27
89	93	AUSTRALIA-NT	PALMER R. JAMES RANGES	24.2S	132.2E	24.4S	135.2E	5	LO	250	U	Y	19910409	075153	244	284	12	58
89	94	AUSTRALIA-NT	FINKE R. KRICHAUFF RANGES	24.2S	135.4E	24.5S	135.4E	5	LO	250	U	Y	19910409	075158	244	284	12	58
89	95	AUSTRALIA-NT	SIMPSON DESERT, DARK	24.7S	136.1E			0	LO	250	U	N	19910409	075207	244	283	11	58
89	96	AUSTRALIA-NT	SIMPSON DESERT, DARK	24.8S	136.6E			0	LO	250	U	N	19910409	075215	244	283	11	58
92	65	AUSTRALIA-NT	LAKE WOODS AREA	17.8S	133.5E	16.8S	133.6E	50	LO	250	N	N	19910407	072908	243	284	21	27
92	66	AUSTRALIA-NT	LAKE WOODS AREA	17.4S	133.5E	17.0S	133.9E	50	LO	250	N	N	19910407	072915	243	284	20	27
92	67	AUSTRALIA-NT	LAKE WOODS AREA	18.2S	133.7E	17.1S	134.2E	60	LO	250	N	N	19910407	072920	243	284	20	27
92	68	AUSTRALIA-NT	SE. LAKE WOODS AREA	18.5S	134.5E	17.5S	135.0E	70	LO	250	N	N	19910407	072934	243	284	19	27
153	8	AUSTRALIA-NT	LAKES MACKAY, MACDONALD	23.0S	129.5E	23.4S	131.5E	15	LO	250	N	N	19910409	075055	245	285	15	58
153	9	AUSTRALIA-NT	LAKES MACKAY, TODD R	23.5S	129.0E	23.6S	132.2E	25	LO	250	N	Y	19910409	075108	245	285	15	58
153	10	AUSTRALIA-NT	MACDONNEL RANGES, TODD R	24.0S	133.5E			5	LO	250	N	N						
153	11	AUSTRALIA-NT	MACDONNEL R., SIMPSON D.	23.5S	135.0E	24.0S	133.7E	5	LO	250	U	Y	19910409	075129	245	284	13	58
153	12	AUSTRALIA-NT	MACDONNEL R., SIMPSON D.	24.5S	135.0E			5	LO	250	U	Y						
73	60	AUSTRALIA-Q	COAST, W. OF WELLESLEY IS.	16.7S	138.6E	18.7S	138.1E	20	LO	250	N	N	19910407	073026	243	283	16	27
73	61	AUSTRALIA-Q	SO. WELLESLEY ISLANDS	17.0S	139.2E	18.9S	138.4E	60	LO	250	N	N	19910407	073032	243	283	16	27
73	62	AUSTRALIA-Q	WAGGABOONAH MTN. RANGE			19.3S	139.5E	60	LO	250	N	N	19910407	073050	243	282	14	27
73	63	AUSTRALIA-Q	WAGGABOONAH MTN. RANGE			19.4S	139.7E	50	LO	250	N	N	19910407	073054	243	282	14	27
73	64	AUSTRALIA-Q	PAROO MTN. RANGE			19.5S	140.0E	40	LO	250	N	N	19910407	073059	243	282	14	27
73	65	AUSTRALIA-Q	STANDISH, SELWYN RANGES			19.6S	140.3E	50	LO	250	N	N	19910407	073103	243	282	14	27
73	66	AUSTRALIA-Q	STANDISH, SELWYN RANGES			19.7S	140.5E	50	LO	250	N	N	19910407	073107	243	282	13	27
73	67	AUSTRALIA-Q	STANDISH, SELWYN RANGES			20.0S	141.3E	40	LO	250	N	N	19910407	073120	243	282	13	27
73	68	AUSTRALIA-Q	CLONCURRY AREA			20.1S	141.6E	40	LO	250	N	N	19910407	073125	243	282	12	27

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		MADIR		CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN	EL	OR
				LAT	LONG	LAT	LONG												
73	69	AUSTRALIA-Q	AREA E. OF CLONCURRY	20.2S	141.9E	20.2S	141.9E	40	LO	250	N	N	19910407	073131	243	281	12	27	
73	70	AUSTRALIA-Q	N. CENTRAL QUEENSLAND	20.5S	142.7E	20.5S	142.7E	20	LO	250	N	N	19910407	073144	243	281	11	27	
73	71	AUSTRALIA-Q	N. CENTRAL QUEENSLAND	20.6S	142.9E	20.6S	142.9E	30	LO	250	N	N	19910407	073147	243	281	11	27	
73	72	AUSTRALIA-Q	N. CENTRAL QUEENSLAND	20.7S	143.3E	20.7S	143.3E	20	LO	250	N	N	19910407	073153	243	281	10	27	
73	73	AUSTRALIA-Q	N. CENTRAL QUEENSLAND	21.2S	144.6E	21.2S	144.6E	40	LO	250	N	N	19910407	073216	243	281	9	27	
92	69	AUSTRALIA-Q	BARKLY TABLELAND	18.8S	138.2E	18.8S	138.2E	5	LO	250	N	N	19910407	073028	243	283	16	27	
92	70	AUSTRALIA-Q	BARKLY TABLELAND	19.1S	139.1E	19.1S	139.1E	10	LO	250	N	N	19910407	073043	243	282	15	27	
92	71	AUSTRALIA-Q	W. CENTRAL	19.5S	139.9E	19.5S	139.9E	30	LO	250	N	N	19910407	073057	243	282	14	27	
92	72	AUSTRALIA-Q	W. CENTRAL	19.7S	140.4E	19.7S	140.4E	70	LO	250	N	N	19910407	073106	243	282	13	27	
92	73	AUSTRALIA-Q	CENTRAL	20.0S	141.3E	20.0S	141.3E	20	LO	250	N	N	19910407	073121	243	282	12	27	
92	74	AUSTRALIA-Q	CENTRAL	20.3S	142.1E	20.3S	142.1E	10	LO	250	N	N	19910407	073134	243	281	12	27	
92	75	AUSTRALIA-Q	CENTRAL, DARK IMAGE	20.8S	143.4E	20.8S	143.4E	10	LO	250	N	N	19910407	073155	243	281	10	27	
92	76	AUSTRALIA-Q	CENTRAL, DARK IMAGE	21.1S	144.3E	21.1S	144.3E	40	LO	250	N	N	19910407	073211	243	281	9	27	
151	159	AUSTRALIA-Q	PRINCE OF WALES I.	10.5S	142.0E	9.8S	141.2E	65	NV	250	N	Y	19910406	062951	242	283	30	11	
151	159	AUSTRALIA-Q	CAPE YORK PENINSULA	11.5S	142.0E	9.9S	141.4E	25	LO	250	N	Y	19910406	062957	242	283	29	11	
151	160	AUSTRALIA-Q	CAPE YORK PENINSULA	13.0S	143.5E	10.7S	142.9E	40	LO	250	N	N	19910406	063023	242	283	28	11	
152	149	AUSTRALIA-Q	MOA I. - BANDU I. - TORRES S	10.0S	142.5E	9.6S	142.8E	70	NV	250	N	Y	19910407	055119	243	286	37	26	
152	150	AUSTRALIA-Q	MOA I. - BANDU I. - TORRES S	10.0S	142.5E	9.9S	143.4E	75	NV	250	N	Y	19910407	055130	243	286	36	26	
152	151	AUSTRALIA-Q	CAPE MELVILLE - GR. BARRIER	13.5S	144.5E	11.2S	145.8E	75	LO	250	N	N	19910407	055214	243	286	34	26	
9	1	AUSTRALIA-SA	AREA W. OF LAKE EYRE	28.0S	134.0E	28.0S	133.2E	20	LO	35	N	N	19910411	081348	245	284	8	89	
9	2	AUSTRALIA-SA	AREA W. OF LAKE EYRE	28.0S	134.0E	28.0S	133.4E	20	LO	35	N	N	19910411	081351	245	284	8	89	
9	3	AUSTRALIA-SA	AREA W. OF LAKE EYRE	28.0S	135.0E	28.0S	134.1E	0	LO	35	N	N	19910411	081401	245	283	7	89	
9	4	AUSTRALIA-SA	LAKE EYRE AREA	28.5S	137.4E	28.2S	135.7E	0	LO	35	N	N	19910411	081425	245	282	6	89	
9	5	AUSTRALIA-SA	AREA NE. LAKE EYRE	27.0S	138.0E	28.3S	137.1E	0	LO	35	N	N	19910411	081445	245	282	4	89	
9	6	AUSTRALIA-SA	AREA NE. LAKE EYRE	27.0S	138.0E	28.3S	137.5E	0	LO	35	N	N	19910411	081452	245	282	4	89	
9	7	AUSTRALIA-SA	AREA E. OF LAKE EYRE	28.0S	140.0E	28.4S	138.6E	0	LO	35	N	N	19910411	081507	245	281	3	89	
9	8	AUSTRALIA-SA	AREA E. OF LAKE EYRE	28.0S	140.0E	28.4S	139.5E	0	LO	35	N	N	19910411	081520	245	281	2	89	
9	9	AUSTRALIA-SA	LAKE FROME AREA	30.3S	140.0E	28.5S	140.0E	0	LO	35	N	N	19910411	081528	245	280	2	89	
9	10	AUSTRALIA-SA	AREA S. OF LAKE YAMMA YAM	27.5S	142.0E	28.5S	141.4E	0	LO	35	N	N	19910411	081549	245	280	0	89	
12	27	AUSTRALIA-SA	L. EYRE, SIMPSON DESERT	27.0S	137.0E	24.5S	136.6E	5	LO	35	N	N	19910410	071324	245	288	19	73	
12	28	AUSTRALIA-SA	L. EYRE BASIN, SIMPSON D	28.0S	139.0E	24.7S	137.5E	20	LO	35	N	N	19910410	071338	245	288	18	73	
12	29	AUSTRALIA-SA	L. EYRE BASIN, SIMPSON D	28.0S	139.0E	25.7S	141.5E	30	LO	35	N	N	19910410	071440	245	286	15	73	
12	21	AUSTRALIA-WA	EIGHTY MILE BEACH	20.0S	122.0E	20.1S	123.0E	30	LO	35	N	N	19910410	070944	246	294	33	73	
12	22	AUSTRALIA-WA	EIGHTY MILE BEACH	21.0S	123.0E	20.6S	124.3E	35	HO	35	N	N	19910410	071005	246	294	32	73	
12	23	AUSTRALIA-WA	GREAT SANDY DESERT	22.0S	124.0E	20.9S	125.2E	35	HO	35	N	N	19910410	071020	246	294	31	73	
12	24	AUSTRALIA-WA	GIBSON D., L. DISAPPOINT	24.0S	123.0E	21.7S	127.4E	30	HO	35	N	N	19910410	071057	246	293	29	73	
41	19	AUSTRALIA-WA	EIGHTY MILE BEACH	19.0S	122.0E	17.7S	119.0E	40	LO	35	N	N	19910411	063016	248	303	46	88	
41	20	AUSTRALIA-WA	EIGHTY MILE BEACH	20.0S	121.0E	17.8S	119.2E	30	LO	35	N	N	19910411	063019	248	303	46	88	
41	21	AUSTRALIA-WA	EIGHTY MILE BEACH	20.0S	121.0E	17.9S	119.3E	35	LO	35	N	N	19910411	063022	248	303	46	88	
41	22	AUSTRALIA-WA	CAPE KERAUDREN	20.0S	120.0E	18.0S	119.7E	30	LO	35	N	N	19910411	063028	248	302	45	88	

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	LONG	MADIR LAT	LONG	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
41	23	AUSTRALIA-WA	GREAT SANDY DESERT	20.0S	122.0E	18.4S	120.4E	45	L0	35	N	N	19910411	063041	248	302	44	88
41	24	AUSTRALIA-WA	COAST, KIMBERLY PLAT.	17.0S	123.0E	18.5S	120.7E	75	L0	35	N	N	19910411	063046	248	302	44	88
41	25	AUSTRALIA-WA	FORESTIER IS. AREA	21.0S	118.0E	18.7S	121.4E	30	L0	35	N	N	19910411	063057	248	302	43	88
41	26	AUSTRALIA-WA	GREAT SANDY DESERT		19.0S	121.9E	65	L0	35	N	N	N	19910411	063107	248	301	43	88
41	27	AUSTRALIA-WA	GREAT SANDY DESERT	21.0S	123.0E	19.2S	122.4E	65	L0	35	N	N	19910411	063115	248	301	42	88
41	28	AUSTRALIA-WA	GREAT SANDY/GIBSON DES.		19.4S	122.9E	65	H0	35	N	N	N	19910411	063124	248	301	42	88
41	29	AUSTRALIA-WA	GREAT SANDY/GIBSON DES.	21.0S	124.0E	19.6S	123.4E	70	L0	35	N	N	19910411	063132	248	301	41	88
41	30	AUSTRALIA-WA	GREAT SANDY/GIBSON DES.		19.8S	124.0E	60	L0	35	N	N	N	19910411	063142	248	300	40	88
41	31	AUSTRALIA-WA	GREAT SANDY/GIBSON DES.		20.0S	124.5E	75	L0	35	N	N	N	19910411	063151	247	300	40	88
41	32	AUSTRALIA-WA	GREAT SANDY/GIBSON DES.		20.2S	124.9E	80	L0	35	N	N	N	19910411	063157	247	300	40	88
41	33	AUSTRALIA-WA	LAKE DORA, GIBSON DESERT	22.0S	123.0E	20.4S	125.5E	45	L0	35	N	N	19910411	063207	247	299	39	88
41	34	AUSTRALIA-WA	L. BLANCHE GIBSON DESERT	23.0S	123.0E	20.5S	125.7E	35	L0	35	N	N	19910411	063211	247	299	39	88
41	35	AUSTRALIA-WA	LAKE DORA, GIBSON DESERT	22.0S	123.0E	21.2S	127.7E	40	L0	35	N	N	19910411	063243	247	298	37	88
41	36	AUSTRALIA-WA	PERCIVAL LAKES	21.0S	126.0E	21.7S	129.2E	20	L0	35	N	N	19910411	063309	247	298	35	88
41	37	AUSTRALIA-WA	GIBSON DESERT	23.0S	124.0E	22.1S	130.4E	35	L0	35	N	N	19910411	063328	247	297	34	88
45	4	AUSTRALIA-WA	EXMOUTH PENINSULA/BAY	23.0S	115.0E	24.4S	112.2E	30	H0	35	N	Y	19910410	084644	245	289	20	74
45	5	AUSTRALIA-WA	EXMOUTH PENINSULA/BAY	24.0S	115.0E	24.4S	112.4E	30	L0	35	N	Y	19910410	084647	245	289	20	74
45	6	AUSTRALIA-WA	NW COAST	25.0S	115.0E	24.5S	112.8E	30	L0	35	N	Y	19910410	084654	245	289	20	74
45	7	AUSTRALIA-WA	NW COAST	25.0S	114.0E	24.7S	113.7E	40	L0	35	N	Y	19910410	084707	245	288	19	74
45	8	AUSTRALIA-WA	EXMOUTH PENINSULA/BAY	23.0S	115.0E	25.0S	114.7E	30	L0	35	N	Y	19910410	084723	245	288	18	74
56	24	AUSTRALIA-WA	SHARK BAY	26.0S	114.0E	24.4S	114.0E	25	L0	35	N	N	19910411	080857	247	294	27	89
56	25	AUSTRALIA-WA	SHARK BAY	25.0S	114.0E	24.5S	114.4E	25	L0	35	N	N	19910411	080903	247	293	26	89
56	26	AUSTRALIA-WA	KENNEDY RANGE, LYONS R.	24.0S	116.0E	24.8S	115.5E	0	L0	35	N	N	19910411	080920	247	293	25	89
56	27	AUSTRALIA-WA	LOCKIER RANGE	25.0S	116.0E	25.0S	116.3E	10	L0	35	N	N	19910411	080933	247	292	24	89
56	28	AUSTRALIA-WA	LOCKIER RANGE	25.0S	116.0E	25.3S	117.5E	5	L0	35	N	N	19910411	080952	247	292	23	89
56	29	AUSTRALIA-WA	HAMERSLEY RANGES	25.0S	118.0E	25.4S	117.9E	5	L0	35	N	N	19910411	080958	246	292	23	89
56	30	AUSTRALIA-WA	HAMERSLEY RANGES	26.0S	120.0E	25.5S	118.4E	5	L0	35	N	N	19910411	081006	246	291	22	89
56	31	AUSTRALIA-WA	HAMERSLEY RANGES	25.0S	119.0E	25.6S	119.0E	55	L0	35	N	N	19910411	081014	246	291	22	89
56	32	AUSTRALIA-WA	W. GIBSON DESERT	26.0S	120.0E	25.7S	119.5E	40	L0	35	N	N	19910411	081023	246	291	21	89
56	33	AUSTRALIA-WA	GIBSON DES., L. WAY	27.0S	120.0E	25.9S	120.2E	5	L0	35	N	N	19910411	081033	246	290	20	89
56	34	AUSTRALIA-WA	GIBSON DES., L. CARNEGIE	26.0S	123.0E	26.2S	122.0E	0	L0	35	N	N	19910411	081100	246	289	19	89
56	35	AUSTRALIA-WA	GREAT VICTORIA DESERT	28.0S	124.0E	26.8S	124.8E	25	L0	35	N	N	19910411	081143	246	288	16	89
56	36	AUSTRALIA-WA	GREAT VICTORIA DESERT	30.0S	125.0E	27.3S	128.3E	15	L0	35	N	N	19910411	081235	246	286	13	89
56	37	AUSTRALIA-WA	MULLARBOR PLAIN	31.0S	129.0E	27.5S	129.3E	45	L0	35	N	N	19910411	081251	246	286	12	89
98	14	AUSTRALIA-WA	NW.CAPE, EXMOUTH GULF	22.0S	114.0E	18.5S	113.7E	10	L0	250	N	N	19910407	090343	243	283	17	28
98	15	AUSTRALIA-WA	BARROW ISLAND	20.8S	115.4E	18.8S	114.4E	0	L0	250	N	N	19910407	090356	243	283	16	28
98	16	AUSTRALIA-WA	EXMOUTH GULF, NW.CAPE	21.8S	114.5E	19.0S	114.8E	30	L0	250	N	N	19910407	090402	243	283	16	28
98	17	AUSTRALIA-WA	NE OF EXMOUTH GULF	21.5S	115.5E	19.0S	115.0E	30	L0	250	N	N	19910407	090405	243	283	16	28
98	18	AUSTRALIA-WA	NE OF EXMOUTH GULF	21.2S	115.8E	19.1S	115.2E	20	L0	250	N	N	19910407	090409	243	283	15	28
98	19	AUSTRALIA-WA	DAMPIER ARCH., DAMPIER	20.7S	116.8E	19.4S	115.9E	30	L0	250	N	N	19910407	090421	243	282	14	28

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
98	20	AUSTRALIA-WA	E. OF DAMPIER, ROEBOURNE	20.8S 117.2E	19.5S 116.2E	20	LO	250	N	N	19910407	090426	243	282	14	28
98	21	AUSTRALIA-WA	YULE & TURNER RIVERS	20.8S 118.1E	19.6S 116.4E	0	LO	250	N	N	19910407	090430	243	282	14	28
98	22	AUSTRALIA-WA	PORT HEDLAND	20.6S 118.4E	20.0S 117.6E	0	LO	250	N	N	19910407	090449	243	282	13	28
98	23	AUSTRALIA-WA	PORT HEDLAND, DE SHAW RVR	20.4S 119.2E	20.2S 117.9E	0	LO	250	N	N	19910407	090454	243	282	12	28
98	24	AUSTRALIA-WA	MOUNT GOLDSWORTHY	20.3S 119.8E	20.3S 118.3E	0	LO	250	N	N	19910407	090501	243	282	12	28
98	25	AUSTRALIA-WA	GEORGE RANGE	21.0S 119.5E	20.5S 118.9E	0	LO	250	N	N	19910407	090511	243	281	11	28
98	26	AUSTRALIA-WA	GEORGE RANGE	21.0S 120.0E	20.6S 119.0E	0	LO	250	N	N	19910407	090513	243	281	11	28
98	27	AUSTRALIA-WA	GEORGE RANGE	21.0S 120.2E	20.6S 119.2E	0	LO	250	N	N	19910407	090516	243	281	11	28
98	28	AUSTRALIA-WA	EAST OF GEORGE RANGE	20.7S 119.3E	20.7S 119.3E	5	LO	250	N	N	19910407	090518	243	281	11	28
98	29	AUSTRALIA-WA	EAST OF GEORGE RANGE	20.7S 119.5E	20.7S 119.5E	20	LO	250	N	N	19910407	090521	243	281	11	28
98	30	AUSTRALIA-WA	EAST OF GEORGE RANGE	20.8S 119.7E	20.8S 119.7E	20	LO	250	N	N	19910407	090524	243	281	10	28
98	31	AUSTRALIA-WA	EIGHTY MILE BEACH	21.1S 120.4E	20.1S 120.4E	20	LO	250	N	N	19910407	090536	243	281	10	28
98	32	AUSTRALIA-WA	NW. CORNER GRT. SNDY DEST	21.2S 120.7E	21.2S 120.7E	50	LO	250	N	N	19910407	090541	243	281	9	28
98	33	AUSTRALIA-WA	NW. CORNER GRT. SNDY DEST	22.0S 123.2E	22.0S 123.2E	50	LO	250	N	N	19910407	090622	243	280	7	28
151	183	AUSTRALIA-WA	BUCCANEER ARCH., KING SOU	16.0S 123.5E	12.9S 123.4E	40	LO	250	N	N	19910406	080508	242	282	23	12
71	7	BAHAMAS	GREAT BAHAMA BK., EXUMA I	23.5N 76.0W	24.8N 75.4W	20	LO	250	N	Y	19910405	160729	245	141	66	2
71	8	BAHAMAS	GREAT BAHAMA BK., EXUMA I	23.5N 75.5W	24.8N 75.3W	20	LO	250	N	Y	19910405	160731	245	141	66	2
71	9	BAHAMAS	GREAT BAHAMA BK., EXUMA I	23.5N 75.5W	24.8N 75.2W	20	LO	250	N	Y	19910405	160733	245	142	67	2
71	10	BAHAMAS	EXUMA I., -VERY DARK FRAME	23.5N 75.5W	24.7N 75.0W	20	LO	250	N	Y	19910405	160735	245	142	67	2
71	11	BAHAMAS	EXUMA I., -VERY DARK FRAME	23.5N 75.5W	24.7N 74.9W	20	LO	250	N	Y	19910405	160737	245	142	67	2
74	31	BAHAMAS	MAYAGUANA IS.	22.5N 73.4W	4.8N 18.8W	50	LO	250	N	N	19910409	133355	245	102	40	62
74	32	BAHAMAS	MAYAGUANA IS.	22.4N 73.0W	4.8N 18.8W	30	LO	250	N	N	19910409	133357	245	102	40	62
74	33	BAHAMAS	PROVIDENCETALES	21.9N 72.0W	4.9N 19.0W	60	LO	250	N	N	19910409	133402	245	102	41	62
76	5	BAHAMAS	ANDROS ISLAND	24.3N 77.8W	4.8N 42.5W	70	LO	250	N	N	19910409	150917	245	107	51	63
76	6	BAHAMAS	ANDROS ISLAND	24.3N 77.8W	4.8N 42.5W	70	LO	250	N	N	19910409	150932	245	107	52	63
76	7	BAHAMAS	TONGUE OF OCEAN AREA	24.2N 75.4W	4.8N 42.6W	60	LO	250	N	N	19910409	150945	245	107	53	63
76	8	BAHAMAS	TONGUE OF OCEAN AREA	24.7N 75.8W	4.8N 42.7W	70	LO	250	N	N	19910409	150957	245	107	53	63
76	9	BAHAMAS	CAT ISLAND	24.4N 75.5W	5.8N 45.4W	60	LO	250	N	N	19910409	151159	245	110	61	63
76	10	BAHAMAS	CROOKED & ACKLINS IS.	22.8N 73.8W	6.0N 45.7W	60	LO	250	N	N	19910409	151210	245	110	62	63
76	11	BAHAMAS	ACKLINS ISLAND	23.0N 73.5W	6.1N 46.0W	60	LO	250	N	N	19910409	151217	245	110	62	63
76	12	BAHAMAS	MAYAGUANA IS.	22.6N 72.8W	6.2N 46.1W	60	LO	250	N	N	19910409	151222	244	110	63	63
77	62	BAHAMAS	ANDROS ISLAND, CLDY	24.5N 77.8W	28.4N 74.5W	40	LO	250	N	N	19910406	134925	246	106	39	16
92	101	BAHAMAS	GRAND BAHAMA	26.5N 79.0W	28.5N 75.5W	60	LO	250	N	N	19910407	131015	246	99	30	31
92	102	BAHAMAS	GRAND BAHAMA	26.6N 78.2W	28.5N 75.2W	60	LO	250	N	N	19910407	131019	246	99	31	31
92	103	BAHAMAS	GREAT ABACO	26.5N 77.4W	28.5N 74.9W	70	LO	250	N	N	19910407	131024	246	99	31	31
92	104	BAHAMAS	ANDROS ISLAND	24.8N 78.0W	28.5N 74.1W	60	LO	250	N	N	19910407	131035	246	100	32	31
97	102	BAHAMAS	ANDROS IS., CLDY, HAZY	24.5N 78.5W	25.9N 80.7W	70	LO	250	N	N	19910406	120836	246	88	12	15
97	104	BAHAMAS	CLDY, HAZY, NEAR ANDROS I	24.8N 78.0W	26.7N 76.2W	60	LO	250	N	N	19910406	120944	246	91	16	15
97	105	BAHAMAS	ANDROS IS., HAZY, CLDY	24.8N 78.0W	26.9N 75.4W	60	LO	250	N	N	19910406	120956	246	91	17	15
97	106	BAHAMAS	ANDROS IS., HAZY, CLDY	24.8N 78.0W	27.2N 73.1W	80	LO	250	N	N	19910406	121030	246	92	19	15



TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	CENTER LON	NADIR LAT	NADIR LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL	OR
99	47	BAHAMAS	WESTERN END BAHAMAS	27.5N	77.0W	28.5N	74.5W	30	HO	40	N	N	19910407	131030	246	100	31	31
99	48	BAHAMAS	WESTERN END BAHAMAS	27.5N	77.0W	28.5N	73.6W	30	HO	40	N	N	19910407	131042	246	100	32	31
73	48	BAHRAIN	DHAHRAN, SAUDI ARABIA	25.9N	51.2E	23.9N	51.1E	20	LO	250	N	N	19910407	070418	246	123	61	27
151	136	BAY OF BENGAL	IRRAWADDY RIVER DELTA	16.0N	93.5E	16.1N	94.3E	50	LO	250	N	Y	19910406	061512	244	217	77	11
152	111	BAY OF BENGAL	PART OF BANGLADESH COAST	21.0N	91.0E	18.9N	89.7E	55	LO	250	N	N	19910407	053453	245	149	75	26
152	207	BAY OF BENGAL	PALK ST.-INDIA SRI LANKA	10.0N	80.5E	10.5N	83.6E	35	LO	250	N	Y	19910407	071335	244	252	78	27
71	54	BELIZE	AMBERGRIS CAY	18.0N	88.0W	20.8N	86.2W	45	LO	250	N	Y	19910405	174425	245	177	75	3
71	55	BELIZE	CHETUMAL BAY	18.5N	88.0W	20.6N	85.8W	45	LO	250	N	Y	19910405	174433	245	179	75	3
71	56	BELIZE	TURNERFE ISLANDS	17.5N	87.5W	20.5N	85.5W	45	LO	250	N	Y	19910405	174437	245	180	75	3
71	57	BELIZE	COAST, REEFS, SHOALS	17.0N	88.0W	20.2N	84.7W	45	LO	250	N	Y	19910405	174451	245	183	75	3
71	58	BELIZE	AMBERGRIS, CORKER CAYS	18.0N	88.0W	19.9N	83.8W	50	LO	250	N	Y	19910405	174505	245	187	76	3
71	59	BELIZE	AMBERGRIS CAY	18.0N	88.0W	19.7N	83.2W	55	LO	250	N	Y	19910405	174515	244	190	76	3
72	88	BHUTAN	G.HIMALAYA RAN.-P'U-MU L	28.0N	91.0E	27.1N	93.1E	10	LO	100	N	Y	19910406	011613	246	94	21	8
91	100	BHUTAN	HIMALAYA RANGE, DOGEN L.	28.0N	89.5E	26.1N	87.4E	30	LO	250	N	N	19910406	011447	246	91	16	8
10	12	BOLIVIA	LAKE POOPO	19.0S	67.0W	19.7S	69.1W	65	LO	35	N	N	19910410	193715	247	298	38	81
10	13	BOLIVIA	UYUNI SALT	20.0S	68.0W	19.9S	68.6W	55	LO	35	N	N	19910410	193724	247	297	37	81
10	14	BOLIVIA	EAST CENTRAL ANDES	20.0S	65.0W	20.7S	66.5W	65	LO	35	N	N	19910410	193759	247	296	35	81
73	30	BOLIVIA	SWAMPY LOWLANDS	20.0S	65.0W	20.7S	66.5W	65	LO	35	N	N	19910410	193759	247	296	35	81
73	31	BOLIVIA	SWAMPY LOWLANDS	16.5S	60.1W	16.5S	60.1W	70	LO	250	N	N	19910406	203452	243	283	18	20
78	100	BOLIVIA	LAKES POOPO, COIPASA	19.0S	68.0W	12.0S	63.7W	30	HO	250	N	Y	19910409	183645	245	297	50	65
78	101	BOLIVIA	L. POOPO, UYUNI SALT	20.5S	67.5W	12.0S	63.6W	15	HO	250	N	Y	19910409	183648	245	297	49	65
78	102	BOLIVIA	SALT DE UYUNI	21.5S	68.0W	12.2S	63.4W	15	HO	250	N	Y	19910409	183652	245	297	49	65
78	103	BOLIVIA	BENT, MADRE DE DIOS R.	11.0S	66.0W	12.6S	62.5W	65	LO	250	N	N	19910409	183708	245	297	48	65
78	104	BOLIVIA	MOJOS PLAIN, SMOKE	12.8S	62.1W	12.8S	62.1W	25	LO	250	N	N	19910409	183715	245	297	48	65
78	105	BOLIVIA	MOJOS PLAIN, SMOKE	12.8S	61.9W	12.8S	61.9W	35	LO	250	N	N	19910409	183718	245	297	48	65
78	106	BOLIVIA	MOJOS PLAIN, SMOKE	13.0S	61.7W	13.0S	61.7W	30	LO	250	N	N	19910409	183722	245	297	47	65
78	107	BOLIVIA	NEAR THE PARAGUA RIVER	13.3S	61.1W	13.3S	61.1W	50	LO	250	N	N	19910409	183733	245	296	47	65
78	108	BOLIVIA	NEAR THE PARAGUA RIVER	13.4S	60.9W	13.4S	60.9W	55	LO	250	N	N	19910409	183737	245	296	46	65
78	109	BOLIVIA	NEAR THE PARAGUA RIVER	13.5S	60.7W	13.5S	60.7W	65	LO	250	N	N	19910409	183740	245	296	46	65
78	110	BOLIVIA	NEAR THE PARAGUA RIVER	13.6S	60.5W	13.6S	60.5W	75	LO	250	N	N	19910409	183744	245	296	46	65
91	88	BOLIVIA	ANDES, CLOUDS, V.DARK	14.4S	66.6W	14.4S	66.6W	75	LO	250	N	N	19910405	211157	243	281	16	5
91	89	BOLIVIA	ANDES, STREAM, CLDS, V.DARK	14.4S	66.4W	14.4S	66.4W	80	LO	250	N	N	19910405	211159	243	281	16	5
91	90	BOLIVIA	ANDES, CLDS, V.DARK	14.5S	66.3W	14.5S	66.3W	80	LO	250	N	N	19910405	211202	243	281	16	5
91	91	BOLIVIA	ANDES, CLDS, STREAM, V.DARK	14.6S	66.0W	14.6S	66.0W	75	LO	250	N	N	19910405	211206	243	281	16	5
91	92	BOLIVIA	ANDES, CLDS, STREAMS, V.DK.	15.8S	63.6W	15.8S	63.6W	75	LO	250	N	N	19910405	211249	243	280	13	5
91	93	BOLIVIA	RIO PARAPETI, VERY DARK	19.5S	62.5W	16.8S	61.4W	40	LO	250	N	N	19910405	211328	243	279	11	5
92	28	BOLIVIA	RIO MADRE DE DIOS AREA	11.0S	66.0W	12.6S	68.3W	80	LO	250	N	N	19910406	203226	243	284	28	20
92	29	BOLIVIA	RIO MADRE DE DIOS AREA	11.0S	66.0W	13.0S	67.5W	80	LO	250	N	N	19910406	203240	243	284	27	20
92	30	BOLIVIA	CLDS, JUNGLE, RIVER	14.0S	65.4W	14.0S	65.4W	80	LO	250	N	N	19910406	203318	243	284	24	20
92	31	BOLIVIA	CLDS, JUNGLE, RIVER	14.1S	65.1W	14.1S	65.1W	90	LO	250	N	N	19910406	203323	243	284	24	20

TABLE 4.4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
92	32	BOLIVIA	CLDS, JUNGLE, RIVER		14.3S	64.8W	80	LO	250	N	19910406	203328	243	284	24	20
92	33	BOLIVIA	CLDS, JUNGLE, RIVER		14.5S	64.3W	90	LO	250	N	19910406	203337	243	283	23	20
92	34	BOLIVIA	CLDS, JUNGLE, RIVER		14.7S	63.9W	95	LO	250	N	19910406	203344	243	283	23	20
92	110	BOLIVIA	N. CENTRAL, RIVERS & LAKES		12.8S	66.0W	40	LO	250	N	19910407	195403	244	287	34	35
92	111	BOLIVIA	N. CENTRAL, RIVERS & LAKES		13.0S	65.4W	50	LO	250	N	19910407	195413	244	287	34	35
92	112	BOLIVIA	N. CENTRAL, RIVERS & LAKES		13.2S	65.2W	40	LO	250	N	19910407	195417	244	287	33	35
92	113	BOLIVIA	N. CENTRAL, RIVERS & LAKES		13.3S	64.9W	60	LO	250	N	19910407	195422	244	287	33	35
92	114	BOLIVIA	N. CENTRAL, RIVERS & LAKES		13.5S	64.6W	70	LO	250	N	19910407	195428	244	287	33	35
92	115	BOLIVIA	N. CENTRAL, RIVERS & LAKES		13.8S	63.9W	80	LO	250	N	19910407	195441	244	287	32	35
92	116	BOLIVIA	BORDER BRAZIL, DEFOREST.		15.4S	60.5W	70	LO	250	N	19910407	195541	244	286	28	35
92	117	BOLIVIA	BORDER BRAZIL, LAKES		15.6S	60.0W	60	LO	250	N	19910407	195549	244	286	27	35
93	11	BOLIVIA	EASTERN FOOTHILLS, ANDES		13.9S	67.4W	55	LO	250	U	19910405	211141	243	281	17	5
93	12	BOLIVIA	EASTERN FOOTHILLS, ANDES		14.0S	67.3W	55	LO	250	U	19910405	211143	243	281	17	5
93	13	BOLIVIA	EASTERN FOOTHILLS, ANDES		14.1S	67.2W	60	LO	250	U	19910405	211146	243	281	17	5
93	14	BOLIVIA	EASTERN FOOTHILLS, ANDES		14.2S	67.0W	60	LO	250	U	19910405	211149	243	281	17	5
93	15	BOLIVIA	EASTERN FOOTHILLS, ANDES		14.2S	66.8W	40	LO	250	U	19910405	211152	243	281	17	5
93	16	BOLIVIA	EASTERN ANDES		15.2S	64.8W	50	LO	250	N	19910405	211229	243	280	14	5
93	17	BOLIVIA	ICHOA RIVER	17.0S	65.5W	64.1W	65	LO	250	U	19910405	211241	243	280	14	5
93	20	BOLIVIA	THUNDERSTORM, PANTANAL		18.1S	58.2W	60	NV	250	N	19910405	211424	243	279	7	5
93	21	BOLIVIA	THUNDERSTORM, PANTANAL		18.4S	57.6W	85	NV	250	N	19910405	211433	243	278	7	5
94	37	BOLIVIA	GRANDE R., SANTA CRUZ	17.0S	62.0W		50	HO	100	N						
153	81	BOLIVIA	L. POOPO, UYUNI SALAR	19.5S	68.5W	19.1S	15	LO	250	N	19910409	201449	247	292	32	66
153	103	BOLIVIA	COLORADO LAKE, ANDES MTS	22.0S	68.0W		0	LO	250	N						
153	104	BOLIVIA	COLORADO LAKE, ANDES MTS	21.5S	66.0W	21.2S	10	LO	250	N	19910409	201624	247	290	26	66
153	105	BOLIVIA	TUMUSLA R., ANDES MTNS.	21.0S	66.0W		5	LO	250	N						
153	106	BOLIVIA	TUMUSLA R., ANDES MTNS.	21.5S	65.0W	21.3S	25	LO	250	N	19910409	201629	247	290	26	66
153	107	BOLIVIA	TUMUSLA R., ANDES MTNS.	21.5S	64.5W		45	LO	250	N						
153	108	BOLIVIA	POZUELOS L. ANDES MTNS.	22.0S	64.5W	21.4S	45	LO	250	N	19910409	201634	247	290	25	66
15	2	BOTSWANA	OKAVANGO SWAMP, SHUA PAN	20.0S	23.0E	16.1S	0	LO	35	N	19910410	132053	247	300	46	77
15	5	BOTSWANA	OKAVANGO SWAMP, SHUA PAN	20.0S	25.0E	16.6S	0	LO	35	N	19910410	132112	247	299	44	77
15	8	BOTSWANA	MAKGADIKGADI PANS	21.0S	25.0E	18.3S	0	LO	35	N	19910410	132220	246	298	40	77
15	11	BOTSWANA	ZAMBEZI, LINYANTI RIVERS	18.0S	25.0E	19.2S	0	LO	35	N	19910410	132257	246	297	38	77
15	12	BOTSWANA	ZAMBEZI, LINYANTI RIVERS	18.0S	25.0E	19.4S	0	LO	35	N	19910410	132307	246	297	37	77
74	65	BOTSWANA	OKAVANGO DELTA, CUBANGO R	19.0S	21.0E	16.8S	0	LO	250	N	19910409	135933	244	294	40	62
74	69	BOTSWANA	OKAVANGO DELTA, SALT PANS	20.0S	23.4E	17.9S	0	LO	250	N	19910409	140016	244	293	37	62
74	71	BOTSWANA	MAKGADIKGADI PANS	20.4S	25.5E	18.2S	0	LO	250	N	19910409	140028	244	293	37	62
74	72	BOTSWANA	MAKGADIKGADI PANS	20.5S	25.3E	21.8E	5	LO	250	N	19910409	140039	244	293	36	62
74	75	BOTSWANA	MAKGADIKGADI PANS AREA		18.8S	22.8E	30	HO	250	N	19910409	140057	244	293	35	62
74	78	BOTSWANA	AREA E. MAKGADIKGADI PANS		19.2S	23.8E	50	HO	250	N	19910409	140113	244	292	34	62
74	79	BOTSWANA	MAKGADIKGADI PANS AREA	20.0S	26.0E	19.5S	0	LO	250	N	19910409	140124	244	292	33	62

TABLE 4.4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	CENTER LON	NADIR LAT	NADIR LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL	OR
77	100	BOTSWANA	MAKGADIKGADI PANS	20.5S	25.6E	12.7S	27.5E	40	LO	250	N	N	19910406	141846	242	283	25	16
77	101	BOTSWANA	MAKGADIKGADI PANS	20.5S	25.6E	13.0S	28.1E	40	LO	250	N	N	19910406	141857	242	283	25	16
80	98	BOTSWANA	ZAMBEZI R., OKAVANGO S.	19.0S	22.0E	11.0S	29.9E	0	HO	250	N	N	19910409	122234	245	296	50	61
80	99	BOTSWANA	ZAMBEZI R., OKAVANGO S.	19.5S	21.5E	11.1S	30.1E	0	HO	250	N	N	19910409	122238	245	296	50	61
80	100	BOTSWANA	ZAMBEZI R., OKAVANGO S.	19.5S	24.0E	11.6S	31.0E	0	HO	250	N	N	19910409	122255	245	296	49	61
80	103	BOTSWANA	MAKARIKARI PANS	20.5S	24.5E	12.4S	32.5E	0	HO	250	N	Y	19910409	122322	245	295	47	61
83	85	BOTSWANA	KALAHARI DES, DUNE FIELD	26.5S	20.6E	24.3S	15.2E	0	LO	100	N	N	19910409	153843	245	285	15	63
83	89	BOTSWANA	OKAVANGO SWAMP, SALT PANS	19.8S	23.8E	25.6S	21.0E	15	HO	100	N	N	19910409	154012	245	283	9	63
87	41	BOTSWANA	MAKGADIKGADI SALT PANS	21.0S	25.0E	11.5S	30.9E	0	HO	250	N	N	19910409	122252	245	296	49	61
87	94	BOTSWANA	OKAVANGO DELTA/SWAMP	19.5S	23.0E	16.3S	16.9E	0	LO	250	N	N	19910409	135915	244	293	38	62
87	95	BOTSWANA	INTERIOR, DARK				16.5S	0	LO	250	N	N	19910409	135920	244	293	38	62
87	96	BOTSWANA	MAKGADIKGADI SALT PANS	20.0S	23.5E	16.6S	17.6E	0	LO	250	Y	Y	19910409	135927	244	293	37	62
87	97	BOTSWANA	NTWETWE SALT PAN, DARK	21.0S	25.0E	16.9S	18.2E	5	LO	250	Y	Y	19910409	135938	244	293	36	62
87	98	BOTSWANA	SUA SALT PAN, DARK	20.0S	26.0E	17.0S	18.5E	5	LO	250	Y	Y	19910409	135943	244	293	36	62
87	100	BOTSWANA	MAKGADIKGADI SALT PANS	22.0S	26.0E	17.4S	19.3E	0	LO	250	N	N	19910409	135956	244	293	35	62
87	103	BOTSWANA	LIMPOPO R., PANORAMA SE.				17.8S	25	HO	250	N	N	19910409	140012	244	292	34	62
87	104	BOTSWANA	MAKGADIKGADI SALT PANS	22.0S	25.5E	18.0S	20.8E	0	LO	250	N	N	19910409	140023	244	292	34	62
87	105	BOTSWANA	HILLS, PRAIRIE, PANOR. SE	19.8S	26.2E	18.1S	21.0E	0	LO	250	N	N	19910409	140026	244	292	33	62
87	107	BOTSWANA	EASTERN PRAIRIE				18.4S	5	LO	250	N	N	19910409	140040	244	292	33	62
87	108	BOTSWANA	EASTERN PRAIRIE				18.5S	20	LO	250	N	N	19910409	140044	244	292	32	62
87	110	BOTSWANA	EASTERN PRAIRIE, DARK				18.8S	30	LO	250	N	N	19910409	140057	244	292	31	62
87	111	BOTSWANA	EASTERN PRAIRIE, DARK				19.1S	30	LO	250	N	N	19910409	140108	244	291	31	62
87	112	BOTSWANA	EASTERN PRAIRIE, DARK				19.2S	50	LO	250	N	N	19910409	140114	244	291	30	62
90	72	BOTSWANA	NTWETWE PAN, DESERT	20.5S	24.5E	12.0S	26.1E	40	LO	250	Y	Y	19910406	141820	242	283	27	16
90	73	BOTSWANA	SUA PAN, DESERT	20.5S	26.5E	12.1S	26.3E	50	LO	250	Y	Y	19910406	141825	242	283	27	16
96	45	BOTSWANA	MAKARIKARI PAN, OKAVANGO	21.0S	26.0E			15	LO	100	N	Y						
10	1	BRAZIL	SAO TOME CAPE	22.0S	40.0W	23.1S	35.5W	30	HO	35	N	N	19910410	180625	246	293	27	80
10	2	BRAZIL	SAO TOME CAPE	23.0S	39.0W	23.2S	35.1W	30	HO	35	N	N	19910410	180631	246	293	27	80
10	20	BRAZIL	THUNDERSTORMS				24.0S	65	LO	35	N	N	19910410	194042	247	292	25	81
10	21	BRAZIL	THUNDERSTORMS				24.1S	75	LO	35	N	N	19910410	194049	247	292	24	81
10	22	BRAZIL	PARANA BASIN				24.3S	60	LO	35	N	N	19910410	194059	247	291	24	81
10	23	BRAZIL	PARANA BASIN, CLOUDS				24.8S	90	LO	35	N	N	19910410	194132	246	290	22	81
10	24	BRAZIL	PARANA BASIN, CLOUDS				25.7S	85	LO	35	N	N	19910410	194233	246	288	18	81
10	25	BRAZIL	EASTERN BRAZIL HIGHLANDS				25.9S	50	LO	35	N	N	19910410	194243	246	288	17	81
16	30	BRAZIL	AMAZON, TAPAJOS RIVERS	2.0S	55.0W	3.5S	53.3W	60	LO	35	N	N	19910410	162035	248	315	74	79
16	31	BRAZIL	AMAZON RIVER	2.0S	53.0W	3.7S	53.1W	75	LO	35	N	N	19910410	162039	248	315	74	79
16	32	BRAZIL	AMAZON RIVER DELTA	0.0S	49.0W	4.5S	51.8W	70	LO	35	N	N	19910410	162105	248	313	72	79
16	33	BRAZIL	NEAR SAN MARCOS BAY	3.0S	43.0W	8.8S	44.1W	65	LO	35	N	N	19910410	162330	247	307	63	79
16	34	BRAZIL	NEAR SAO FRANCISCO BASIN				9.7S	85	LO	35	N	N	19910410	162402	247	306	61	79
16	35	BRAZIL	NEAR SAO FRANCISCO BASIN				10.2S	85	LO	35	N	N	19910410	162417	247	306	60	79

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		NADIR		CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN	EL	OR
				LAT	LONG	LAT	LONG												
16	36	BRAZIL	SAO FRANCISCO RESERVOIR	10.0S	42.0W	10.8S	40.5W	60	L0	35	N	N	19910410	162438	247	305	59	79	
16	37	BRAZIL	SAO FRANCISCO RESERVOIR	10.0S	42.0W	10.9S	40.2W	65	L0	35	N	N	19910410	162443	247	305	58	79	
44	1	BRAZIL	RIO SAO FRANCISCO RESERV	9.0S	38.0W	12.2S	37.8W	60	L0	35	N	Y	19910410	162526	247	304	56	79	
44	2	BRAZIL	RIO SAO FRANCISCO RESERV	9.0S	38.0W	12.2S	37.7W	60	L0	35	N	Y	19910410	162529	247	304	55	79	
44	3	BRAZIL	RIO SAO FRANCISCO MOUTH	10.0S	37.0W	12.4S	37.3W	60	L0	35	N	N	19910410	162536	247	304	55	79	
44	4	BRAZIL	RIO ITAPICURU	10.5S	38.0W	12.6S	37.0W	50	L0	35	N	N	19910410	162541	247	304	55	79	
44	5	BRAZIL	RIO ITAPICURU	11.0S	38.5W	12.8S	36.6W	60	L0	35	N	Y	19910410	162548	247	304	54	79	
44	6	BRAZIL	RIO ITAPICURU	11.0S	38.0W	12.9S	36.3W	60	L0	35	N	Y	19910410	162554	247	303	54	79	
44	7	BRAZIL	RIO ITAPICURU, COAST	11.5S	37.5W	13.1S	36.0W	50	L0	35	N	Y	19910410	162559	247	303	53	79	
44	7A	BRAZIL	RIO ITAPICURU, COAST	10.5S	37.0W			40	L0	35	N	Y							
44	8	BRAZIL	BORBOREMA PLAT, EAST CST.	7.0S	37.0W	13.5S	35.3W	60	H0	35	N	N	19910410	162613	247	303	53	79	
44	9	BRAZIL	PANORAMA-RIO FRANC. BASIN	10.0S	42.0W	13.8S	34.7W	75	H0	35	N	N	19910410	162624	247	303	52	79	
44	18	BRAZIL	AMAZON BASIN, CLOUDS			6.6S	72.0W	80	H0	35	N	N	19910410	175543	248	311	88	80	
44	19	BRAZIL	AMAZON BASIN, CLOUDS			8.7S	68.2W	80	L0	35	N	N	19910410	175655	248	308	64	80	
44	20	BRAZIL	RIO TIETE, CLOUDS	21.0S	50.5W	18.5S	48.2W	80	L0	35	N	Y	19910410	180255	247	299	41	80	
44	21	BRAZIL	RIO PARANA, JUPTA RESERV.	20.5S	50.5W	18.6S	48.0W	80	L0	35	N	Y	19910410	180258	247	299	41	80	
44	22	BRAZIL	RIO PARANAIBA/RESERVOIR	19.0S	49.0W	18.7S	47.7W	75	L0	35	N	N	19910410	180303	247	298	40	80	
44	23	BRAZIL	RIO PARANAIBA/RESERVOIR	18.5S	47.5W	18.8S	47.5W	60	L0	35	N	Y	19910410	180307	247	298	40	80	
44	24	BRAZIL	HILLS, CLOUDS	18.0S	47.0W	18.9S	47.2W	60	L0	35	N	Y	19910410	180312	247	298	40	80	
44	25	BRAZIL	RIO PARANAIBA, CLOUDS	18.0S	50.0W	19.1S	46.8W	70	L0	35	N	N	19910410	180319	247	298	39	80	
44	26	BRAZIL	TRES MARIAS RESERVOIR	19.0S	45.0W	19.3S	46.3W	40	L0	35	N	N	19910410	180327	246	298	39	80	
44	27	BRAZIL	DE PEIXOTO RESERVOIR	20.5S	47.0W	19.4S	46.0W	75	L0	35	N	N	19910410	180331	246	298	38	80	
44	28	BRAZIL	TRES MARIAS RESERVOIR	18.0S	44.5W	19.8S	45.0W	50	L0	35	N	Y	19910410	180349	246	297	37	80	
44	29	BRAZIL	TRES MARIAS RESERVOIR	18.5S	45.0W	19.9S	44.6W	40	L0	35	N	Y	19910410	180355	246	297	37	80	
44	30	BRAZIL	RIO DOCE, CLOUDS	19.5S	42.5W	20.5S	43.2W	60	L0	35	N	N	19910410	180419	246	296	35	80	
44	31	BRAZIL	CABO SAO TOME, CABO FRIO	22.0S	42.0W	20.7S	42.6W	50	L0	35	N	Y	19910410	180429	246	296	35	80	
44	32	BRAZIL	CABO SAO TOME, COAST	20.5S	41.5W	20.8S	42.4W	50	L0	35	N	Y	19910410	180433	246	296	34	80	
44	33	BRAZIL	RIO DOCE-MOUTH, COAST	19.5S	41.0W	21.0S	41.9W	60	L0	35	N	N	19910410	180441	246	296	34	80	
44	36	BRAZIL	CABO SAO TOME, CAMPOS	21.5S	41.5W	21.0S	41.6W	30	L0	35	N	N	19910410	180445	246	296	34	80	
44	37	BRAZIL	TRES MARIAS RESERVOIR	19.0S	45.0W	21.2S	41.2W	60	L0	35	N	N	19910410	180452	246	295	33	80	
44	38	BRAZIL	CABO FRIO, COAST, CLOUDS	22.5S	42.5W	21.3S	40.8W	50	L0	35	N	N	19910410	180459	246	295	33	80	
71	73	BRAZIL	RIO UACA, CABO ORANGE	4.5N	51.5W	3.6N	51.2W	20	L0	250	N	N	19910405	175455	243	275	53	3	
71	74	BRAZIL	AMAZON R. DELTA/EFFLUENT	1.0N	50.0W	2.7N	49.7W	20	L0	250	N	N	19910405	175525	243	276	51	3	
72	52	BRAZIL	ARAGUAIA R. DEFORESTATION	10.0S	50.5W	8.3S	54.3W	25	L0	100	N	Y	19910405	193457	242	281	29	4	
72	53	BRAZIL	ARAGUAIA R. - AGRICULTURE	9.5S	50.0W	8.9S	53.3W	20	L0	100	N	Y	19910405	193516	242	281	28	4	
72	54	BRAZIL	RIO ARAGUAIA	9.0S	49.5W	9.8S	51.6W	20	L0	100	N	Y	19910405	193548	242	281	26	4	
72	55	BRAZIL	RIO TOCANTINS	12.5S	47.5W	10.5S	50.4W	15	L0	100	N	Y	19910405	193611	242	281	25	4	
72	56	BRAZIL	RIO PARANA	13.5S	47.0W	10.8S	49.8W	15	L0	100	N	Y	19910405	193622	242	281	24	4	
72	57	BRAZIL	RIO TOCANTINS	9.0S	48.0W	12.5S	46.5W	35	L0	100	N	Y	19910405	193722	243	281	20	4	
72	58	BRAZIL	RIO TOCANTINS	8.5S	48.0W	12.7S	46.0W	45	L0	100	N	Y	19910405	193730	243	281	20	4	

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
72	59	BRAZIL	NE OF TOCANTINS R. & 8.0S	10.5S 42.5W	13.3S 44.8W	40	LO	100	N	N	19910405	193752	243	281	19	4
72	60	BRAZIL	RIO SAO FRANCISCO, RES.	10.5S 42.5W	13.9S 43.8W	20	LO	100	N	Y	19910405	193811	243	281	17	4
72	61	BRAZIL	RIO SAO FRANCISCO, RES.	10.0S 42.0W	14.2S 43.1W	20	LO	100	N	Y	19910405	193823	243	281	17	4
72	62	BRAZIL	RIO SAO FRANCISCO, RES.	11.0S 42.5W	14.5S 42.5W	20	LO	100	N	Y	19910405	193834	243	280	16	4
72	63	BRAZIL	RIO SAO FRANCISCO, RES.	10.0S 41.5W	14.7S 42.0W	20	LO	100	N	Y	19910405	193843	243	280	15	4
72	64	BRAZIL	BAIA DE TODOS OS SANTOS	13.0S 38.5W	15.9S 39.3W	20	LO	100	N	Y	19910405	193930	243	280	12	4
72	65	BRAZIL	SALVADOR-COAST	13.0S 38.5W	16.2S 38.8W	20	LO	100	N	Y	19910405	193939	243	280	12	4
72	66	BRAZIL	SALVADOR-COAST	13.0S 39.0W	16.4S 38.2W	25	LO	100	N	Y	19910405	193949	243	280	11	4
72	67	BRAZIL	CLOUDS-HALF FRAME EXPOSE	18.2S	34.1W	95	LO	100	N	N	19910405	194101	243	278	7	4
75	104	BRAZIL	MOUTH AMAZON RIVER	2.0N 49.5W	3.9N 49.8W	90	LO	250	N	N	19910406	171620	243	276	61	18
76	82	BRAZIL	AREA NEAR SALVADOR	12.8S	38.2W	80	LO	250	N	N	19910409	170350	245	296	47	64
76	83	BRAZIL	AREA NEAR SALVADOR	13.3S	37.1W	95	LO	250	N	N	19910409	170409	245	296	46	64
76	84	BRAZIL	NEAR SALVADOR, COAST	13.8S	36.1W	70	LO	250	N	N	19910409	170427	245	296	45	64
76	85	BRAZIL	NEAR SALVADOR, COAST	13.9S	35.9W	95	LO	250	N	N	19910409	170430	245	296	45	64
78	67	BRAZIL	RIO SAO FRANCISCO BASIN	11.5S 43.5W	9.2S 45.1W	60	LO	250	N	N	19910409	170143	245	298	55	64
78	68	BRAZIL	RIO SAO FRANCISCO BASIN	10.0S 41.5W	9.3S 44.9W	65	LO	250	N	N	19910409	170146	245	298	55	64
78	69	BRAZIL	RIO SAO FRANCISCO BASIN	9.0S 40.0W	9.4S 44.7W	55	LO	250	N	N	19910409	170149	245	298	55	64
78	70	BRAZIL	RIO SAO FRANCISCO BASIN	9.0S 39.0W	9.7S 44.2W	60	HO	250	N	N	19910409	170159	245	298	54	64
78	71	BRAZIL	RIO SAO FRANCISCO BASIN	9.8S	44.0W	60	HO	250	N	N	19910409	170203	245	298	54	64
78	72	BRAZIL	ESPERANCA RESERVOIR	7.0S 43.0W	10.1S 43.3W	65	LO	250	N	Y	19910409	170215	245	298	53	64
78	73	BRAZIL	ESPERANCA RESERVOIR	7.0S 44.0W	10.3S 43.0W	70	LO	250	N	Y	19910409	170221	245	297	53	64
78	74	BRAZIL	OROS RESERVOIR	7.0S 38.0W	10.5S 42.6W	75	LO	250	N	N	19910409	170229	245	297	52	64
78	75	BRAZIL	BORBOREMA PLATEAU	10.9S	42.0W	70	LO	250	N	N	19910409	170240	245	297	52	64
78	76	BRAZIL	CITY OF MACEIO, COAST	9.5S 36.0W	11.2S 41.4W	55	LO	250	N	N	19910409	170251	245	297	51	64
78	77	BRAZIL	EASTERN BRAZIL	11.5S	40.8W	65	HO	250	N	N	19910409	170301	245	297	50	64
78	78	BRAZIL	COAST NORTH OF RECIFE	7.0S 35.0W	11.6S 40.5W	60	HO	250	N	Y	19910409	170307	245	297	50	64
78	79	BRAZIL	COAST NEAR RECIFE	8.0S 35.0W	11.8S 40.2W	60	HO	250	N	Y	19910409	170312	245	297	50	64
78	80	BRAZIL	EASTERN BRAZIL	12.0S	39.8W	70	HO	250	N	N	19910409	170321	245	297	49	64
78	81	BRAZIL	EASTERN BRAZIL	12.4S	38.9W	65	LO	250	N	N	19910409	170336	245	296	48	64
78	82	BRAZIL	COAST NORTH OF MACEIO	9.0S 35.5W	12.9S 38.1W	55	LO	250	N	Y	19910409	170352	245	296	47	64
78	83	BRAZIL	COAST NORTH OF MACEIO	8.5S 35.0W	13.1S 37.6W	60	HO	250	N	Y	19910409	170400	245	296	47	64
78	84	BRAZIL	CITY OF MACEIO, COAST	9.5S 36.0W	13.5S 36.8W	65	LO	250	N	N	19910409	170415	245	296	46	64
79	35	BRAZIL	PT. ORANGE, OIAROU R.	4.0N 51.5W	5.3N 52.1W	30	LO	250	N	N	19910406	171536	243	273	64	18
79	36	BRAZIL	CALCONE RIVER MOUTH	2.5N 51.0W	4.1N 50.0W	75	LO	250	N	N	19910406	171616	243	275	61	18
79	37	BRAZIL	ARAGUARI R. MOUTH, PLUME	1.5N 50.0W	3.4N 48.9W	55	LO	250	N	N	19910406	171637	243	276	60	18
79	38	BRAZIL	AMAZON RIVER DELTA	1.0N 50.0W	3.3N 48.7W	65	LO	250	N	N	19910406	171641	243	277	60	18
79	39	BRAZIL	AMAZON RIVER DELTA	0.5N 50.5W	3.1N 48.4W	70	LO	250	N	Y	19910406	171647	243	277	59	18
79	40	BRAZIL	AMAZON RIVER DELTA	0.5N 49.5W	2.8N 47.8W	60	LO	250	N	N	19910406	171659	243	277	59	18
79	41	BRAZIL	TOCANTINS, PARA RIVERS	2.5S 49.5W	2.1N 46.8W	65	LO	250	N	N	19910406	171722	243	278	57	18
79	42	BRAZIL	MARACANA BAY	0.5S 47.5W	1.4N 45.4W	65	NV	250	N	Y	19910406	171744	243	279	56	18

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
79	43	BRAZIL	MAIAU, CAETE BAYS	1.0S 46.5W	1.3N 45.2W	45	NV	250	N	Y	19910406	171748	243	279	58	18
79	44	BRAZIL	GURUPI BAY	1.0S 46.0W	1.1N 45.0W	35	NV	250	N	Y	19910406	171753	243	279	55	18
79	45	BRAZIL	TURIACU BAY, MATAU IS.	1.5S 45.0W	0.9N 44.6W	55	NV	250	N	Y	19910406	171800	243	279	55	18
79	46	BRAZIL	ST. MARCOS, ST. JOSE BAYS	2.5S 44.0W	0.2S 42.8W	35	NV	250	N	Y	19910406	171835	243	280	53	18
79	47	BRAZIL	COASTAL SAND DUNE FIELD	2.5S 43.0W	0.4S 42.4W	25	NV	250	N	Y	19910406	171842	243	281	52	18
79	48	BRAZIL	PARNAIBA RIVER MOUTH	2.5S 42.0W	0.5S 42.2W	30	LO	250	N	Y	19910406	171847	243	281	52	18
79	49	BRAZIL	PARNAIBA RIVER MOUTH	3.0S 41.5W	0.7S 41.8W	20	LO	250	N	Y	19910406	171853	243	281	52	18
79	50	BRAZIL	PARNAIBA RIVER	3.5S 42.0W	1.0S 41.4W	50	LO	250	N	Y	19910406	171902	243	281	51	18
79	51	BRAZIL	COAST NEAR ACARAU	3.0S 40.0W	1.7S 40.1W	35	LO	250	N	Y	19910406	171926	243	282	50	18
79	52	BRAZIL	COAST NEAR PATOS	3.0S 39.5W	1.9S 39.8W	30	LO	250	N	Y	19910406	171932	243	282	49	18
79	53	BRAZIL	COAST NEAR TRAIRA	3.5S 39.5W	2.0S 39.6W	30	LO	250	N	Y	19910406	171936	243	282	49	18
79	54	BRAZIL	COAST NEAR FORTALEZA	3.5S 39.0W	2.3S 39.2W	20	LO	250	N	Y	19910406	171943	243	282	49	18
79	55	BRAZIL	FORTALEZA, PT. MUCURIPE	3.5S 38.5W	3.4S 37.2W	15	LO	250	N	Y	19910406	172021	243	283	46	18
79	56	BRAZIL	COAST SOUTH OF FORTALEZA	4.0S 38.0W	3.5S 37.0W	25	LO	250	N	Y	19910406	172025	243	283	46	18
79	57	BRAZIL	MOUTH OF JAGUARIBE R.	4.5S 37.5W	3.7S 36.8W	25	LO	250	N	Y	19910406	172029	243	283	46	18
79	58	BRAZIL	AREIA BRANCA, MOCORO	5.0S 37.5W	3.9S 36.5W	30	LO	250	N	Y	19910406	172036	243	283	45	18
79	59	BRAZIL	PIRANHAS R., MARCAU	5.0S 36.5W	4.1S 36.0W	30	LO	250	N	Y	19910406	172044	243	283	45	18
79	60	BRAZIL	COAST NEAR TOUROS	5.0S 35.5W	4.5S 35.3W	30	LO	250	N	Y	19910406	172058	243	283	44	18
79	61	BRAZIL	COAST NEAR NATAL	5.5S 35.5W	4.7S 35.0W	25	LO	250	N	Y	19910406	172103	243	283	44	18
79	62	BRAZIL	COAST NEAR NATAL	6.0S 35.0W	4.9S 34.7W	15	LO	250	N	Y	19910406	172109	243	283	43	18
79	63	BRAZIL	COAST NEAR JOAO PESSOA	7.5S 35.0W	5.6S 33.3W	30	LO	250	N	Y	19910406	172135	243	283	42	18
79	64	BRAZIL	COAST NEAR RECIFE	8.0S 35.0W	5.9S 32.9W	25	LO	250	N	Y	19910406	172143	243	284	41	18
79	65	BRAZIL	COAST NEAR MACEIO	9.0S 35.0W	6.7S 31.4W	30	LO	250	N	Y	19910406	172211	243	284	40	18
79	80	BRAZIL	AMAZON R., LAKE PIORINI	3.5S 63.5W	0.6S 66.0W	35	LO	250	N	Y	19910406	185214	243	281	53	19
79	81	BRAZIL	AMAZON R., LAKE TEFE	3.5S 64.5W	0.7S 65.8W	35	LO	250	N	Y	19910406	185217	243	281	52	19
79	82	BRAZIL	AMAZON R., JUPURA R.	2.5S 65.5W	0.7S 65.7W	30	LO	250	N	Y	19910406	185220	243	281	52	19
79	83	BRAZIL	AMAZON RIVER	2.5S 66.0W	0.8S 65.5W	20	NV	250	N	Y	19910406	185223	243	281	52	19
79	84	BRAZIL	MADEIRA RIVER	5.5S 60.5W	4.0S 60.0W	65	LO	250	N	Y	19910406	185408	243	283	46	19
79	85	BRAZIL	TELES PIRES RIVER	9.0S 57.5W	5.7S 57.1W	55	LO	250	N	Y	19910406	185504	243	284	42	19
79	86	BRAZIL	TELES PIRES RIVER	9.5S 56.5W	5.9S 56.9W	50	LO	250	N	Y	19910406	185508	243	284	42	19
79	87	BRAZIL	S. AMAZON BASIN	6.4S 55.9W	6.4S 55.9W	65	NV	250	N	Y	19910406	185526	243	284	41	19
79	88	BRAZIL	AMAZON BASIN LAND USE	6.9S 55.1W	6.9S 55.1W	35	LO	250	N	Y	19910406	185542	243	284	40	19
79	89	BRAZIL	AMAZON BASIN LAND USE	7.1S 54.6W	7.1S 54.6W	35	LO	250	N	Y	19910406	185550	243	284	39	19
79	90	BRAZIL	AMAZON BASIN LAND USE	8.2S 52.6W	8.2S 52.6W	55	NV	250	N	Y	19910406	185628	243	284	37	19
79	91	BRAZIL	TOCANTINIS RIVER BASIN	10.8S 48.5W	10.8S 48.3W	15	LO	250	N	Y	19910406	185748	243	284	32	19
79	92	BRAZIL	GERAL DO PARANA HILLS	10.6S 47.9W	10.6S 47.9W	15	NV	250	N	Y	19910406	185755	243	284	31	19
79	93	BRAZIL	LAND USE PATTERNS	10.9S 47.7W	10.9S 47.7W	50	NV	250	N	Y	19910406	185759	243	284	31	19
79	94	BRAZIL	LAND USE PATTERNS	11.2S 47.2W	11.2S 47.2W	55	NV	250	N	Y	19910406	185809	243	284	31	19
79	95	BRAZIL	LAND USE PATTERNS	11.3S 46.9W	11.3S 46.9W	40	LO	250	N	Y	19910406	185814	243	284	30	19
79	96	BRAZIL	LAND USE PATTERNS	11.4S 46.7W	11.4S 46.7W	40	LO	250	N	Y	19910406	185818	243	284	30	19

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	LONG	NADIR LAT	LONG	CC	TL	FL	E	S	DATE	GMT	AL	SUN AZ	EL	OR
79	97	BRAZIL	LAND USE PATTERNS			11.5S	46.5W	50	LO	250	N	N	19910406	185822	243	284	30	19
79	98	BRAZIL	LAND USE PATTERNS			12.1S	45.3W	45	LO	250	N	N	19910406	185843	243	284	28	19
79	99	BRAZIL	RES. NEAR SAO FRANCISCO	12.0S	43.0W	14.2S	41.1W	65	LO	250	N	N	19910406	185959	243	283	24	19
79	100	BRAZIL	JEQUITINHONHA RIVER	15.5S	39.5W	14.4S	40.7W	60	HO	250	N	Y	19910406	190007	243	283	23	19
79	101	BRAZIL	JEQUITINHONHA RIVER	16.5S	40.0W	14.5S	40.4W	70	HO	250	N	Y	19910406	190011	243	283	23	19
81	28	BRAZIL	AMAZON BAS. THUNDERSTORM			0.1S	68.7W	95	LO	250	N	N	19910405	193025	243	278	46	4
81	29	BRAZIL	AMAZON BAS. THUNDERSTORM			0.6S	67.8W	95	LO	250	N	N	19910405	193041	243	279	46	4
81	30	BRAZIL	RIO NEGRO	0.0	67.0W	1.3S	66.7W	35	NV	250	U	N	19910405	193103	243	279	44	4
81	31	BRAZIL	RIO NEGRO	0.5S	64.5W	1.4S	66.5W	70	LO	250	U	N	19910405	193106	243	279	43	4
81	32	BRAZIL	CENTRAL AMAZON BASIN			1.8S	65.7W	65	NV	250	U	N	19910405	193121	243	280	43	4
81	33	BRAZIL	AMAZON RIVER	2.5S	66.0W	2.3S	65.0W	65	NV	250	N	N	19910405	193135	242	280	42	4
81	34	BRAZIL	AMAZON RIVER, JAPURA R.	2.5S	65.5W	2.4S	64.8W	45	NV	250	N	N	19910405	193138	242	280	42	4
81	35	BRAZIL	AMAZON RIVER, JAPURA R.	3.0S	65.0W	2.5S	64.7W	40	NV	250	N	N	19910405	193141	242	280	41	4
81	36	BRAZIL	AMAZON RIVER, PARANA CR.	3.5S	64.0W	3.1S	63.5W	40	NV	250	N	N	19910405	193203	242	280	40	4
81	37	BRAZIL	AMAZON R., TEFF LAKE	3.5S	64.5W	3.3S	63.3W	50	NV	250	N	N	19910405	193208	242	280	40	4
81	38	BRAZIL	AMAZON R., MAK LAKE	4.0S	63.0W	3.8S	62.3W	65	NV	250	N	N	19910405	193227	242	281	39	4
81	39	BRAZIL	MADEIRA RIVER	4.0S	59.5W	4.5S	61.2W	60	LO	250	N	Y	19910405	193247	242	281	37	4
81	40	BRAZIL	MADEIRA RIVER	4.5S	60.0W	4.5S	61.1W	55	NV	250	N	Y	19910405	193249	242	281	37	4
81	41	BRAZIL	MADEIRA RIVER	5.0S	60.0W	4.6S	61.0W	70	NV	250	N	Y	19910405	193252	242	281	37	4
81	42	BRAZIL	MADEIRA RIVER	4.5S	60.0W	4.9S	60.4W	50	NV	250	N	Y	19910405	193302	242	281	36	4
81	43	BRAZIL	MADEIRA RIVER	4.5S	59.5W	5.1S	60.2W	55	NV	250	N	Y	19910405	193307	242	281	36	4
81	44	BRAZIL	MADEIRA R., THUNDERSTORM	4.0S	59.5W	5.4S	59.6W	75	NV	250	U	N	19910405	193318	242	281	35	4
81	45	BRAZIL	THUNDERSTORMS, AMAZON B.			7.8S	55.2W	95	LO	250	N	N	19910405	193440	242	281	30	4
81	46	BRAZIL	AMAZON B. LAND USE			8.6S	53.8W	30	NV	250	U	N	19910405	193507	242	281	29	4
81	47	BRAZIL	LAND USE TAPIRAPE HILLS	10.5S	51.5W	9.9S	51.5W	15	NV	250	N	N	19910405	193550	242	281	26	4
81	48	BRAZIL	LAND USE TAPIRAPE HILLS	10.5S	51.5W	9.9S	51.4W	15	NV	250	N	Y	19910405	193552	242	281	26	4
81	49	BRAZIL	LAND USE, ARAGUAIA RIVER	10.5S	51.0W	10.0S	51.2W	15	NV	250	N	Y	19910405	193555	242	281	26	4
81	50	BRAZIL	LAND USE, ARAGUAIA RIVER	11.0S	50.5W	10.1S	51.1W	15	NV	250	U	Y	19910405	193557	242	281	26	4
81	51	BRAZIL	ISLAND OF THE BANANAL	11.0S	50.0W	10.2S	51.0W	30	NV	250	U	Y	19910405	193600	242	281	25	4
81	52	BRAZIL	ISLAND OF THE BANANAL	11.0S	50.0W	10.2S	50.8W	40	NV	250	U	Y	19910405	193602	242	281	25	4
81	53	BRAZIL	ARAGUAIA RIVER	11.0S	50.0W	10.3S	50.7W	25	NV	250	U	N	19910405	193604	242	281	25	4
81	54	BRAZIL	LAND USE NEAR ARAGUAIA R	10.5S	51.0W	10.3S	50.6W	20	LO	250	N	N	19910405	193606	242	281	25	4
81	55	BRAZIL	LAND USE TAPIRAPE HILLS	10.5S	51.5W	10.6S	50.1W	15	LO	250	N	N	19910405	193615	242	281	24	4
81	56	BRAZIL	TOCANTINS RIVER	11.5S	48.5W	11.7S	48.1W	30	LO	250	N	Y	19910405	193652	242	281	22	4
81	57	BRAZIL	TOCANTINS RIVER	12.0S	48.5W	11.7S	48.0W	10	LO	250	N	N	19910405	193655	242	281	22	4
81	58	BRAZIL	TOCANTINS RIVER, V. DARK	11.5S	48.5W	12.1S	47.3W	25	NV	250	U	N	19910405	193708	243	281	21	4
81	59	BRAZIL	E. OF TOCANTINS R., DARK			12.2S	47.1W	15	NV	250	U	N	19910405	193711	243	281	21	4
81	60	BRAZIL	TOCANTINS RIVER, V. DARK	12.5S	48.0W	12.6S	46.4W	10	NV	250	U	N	19910405	193724	243	281	20	4
81	61	BRAZIL	PARANA RIVER	13.5S	47.5W	12.9S	45.8W	10	NV	250	N	Y	19910405	193735	243	281	19	4
81	62	BRAZIL	PARANA, TOCANTINS RIVERS	13.0S	48.0W	13.0S	45.5W	10	LO	250	N	Y	19910405	193740	243	281	19	4

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		MADIR		CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN	EL	OR
				LAT	LONG	LAT	LONG												
81	63	BRAZIL	SAO FRANCISCO RIVER B.	11.5S	43.5W	13.6S	44.3W	45	LO	250	N	Y	19910405	193802	243	281	18	4	
81	64	BRAZIL	SAO FRANCISCO RIVER B.	12.0S	43.5W	13.7S	44.2W	15	NV	250	U	Y	19910405	193804	243	281	18	4	
81	65	BRAZIL	SAO FRANCISCO RIVER B.	12.5S	43.5W	13.7S	44.0W	10	NV	250	U	Y	19910405	193807	243	281	17	4	
81	66	BRAZIL	SAO FRANCISCO RIVER B.	12.5S	43.5W	13.9S	43.7W	10	NV	250	U	Y	19910405	193813	243	281	17	4	
81	67	BRAZIL	SAO FRANCISCO RIVER B.	12.5S	43.5W	14.0S	43.5W	10	NV	250	U	Y	19910405	193816	243	281	17	4	
81	68	BRAZIL	SAO FRANCISCO RIVER B.	13.0S	43.5W	14.1S	43.3W	15	NV	250	U	Y	19910405	193819	243	281	17	4	
81	69	BRAZIL	SAO FRANCISCO RIVER B.	14.0S	43.5W	14.1S	43.2W	20	NV	250	U	Y	19910405	193821	243	281	17	4	
81	70	BRAZIL	SAO FRANCISCO RIVER B.	14.5S	44.0W	14.2S	43.0W	15	LO	250	U	Y	19910405	193825	243	281	18	4	
81	71	BRAZIL	PINHACO HILLS	15.0S	43.0W	14.7S	42.1W	25	LO	250	U	N	19910405	193841	243	280	15	4	
81	72	BRAZIL	PINHACO HILLS	15.5S	42.5W	14.7S	41.9W	35	LO	250	U	Y	19910405	193844	243	280	15	4	
81	73	BRAZIL	PINHACO HILLS	16.0S	42.0W	14.8S	41.8W	15	LO	250	U	Y	19910405	193846	243	280	15	4	
81	74	BRAZIL	PINHACO HILLS, CLOUDS			14.9S	41.6W	80	LO	250	N	N	19910405	193848	243	280	15	4	
81	75	BRAZIL	COAST NEAR SALVADOR	13.5S	39.0W	15.9S	39.5W	5	LO	250	U	Y	19910405	193927	243	280	12	4	
81	76	BRAZIL	COAST S. OF SALVADOR	14.0S	39.0W	15.9S	39.3W	15	LO	250	U	Y	19910405	193930	243	280	12	4	
81	77	BRAZIL	COAST, CLOUDS			16.1S	39.0W	55	LO	250	U	N	19910405	193935	243	280	12	4	
81	78	BRAZIL	COAST, CLOUDS	17.0S	39.0W	16.2S	38.7W	65	LO	250	N	N	19910405	193941	243	280	12	4	
83	93	BRAZIL	FOLDED RIDGES, AGR.	15.5S	56.8W	9.2S	74.9W	50	LO	250	N	Y	19910409	183917	240	295	40	65	
83	94	BRAZIL	RIO CUIABA, RIDGES	15.5S	56.6W	9.2S	75.0W	50	LO	250	N	Y	19910409	183920	240	295	40	65	
83	95	BRAZIL	RIO CUIABA, CUIABA	15.7S	56.0W	9.1S	75.1W	50	LO	250	N	Y	19910409	183923	240	295	39	65	
83	96	BRAZIL	RIO CUIABA, CUIABA	16.0S	56.0W	9.1S	75.2W	40	LO	250	N	Y	19910409	183925	240	295	39	65	
83	97	BRAZIL	RIO CUIABA, SWAMP	16.1S	56.0W	9.0S	75.4W	40	LO	250	N	Y	19910409	183928	240	294	39	65	
83	98	BRAZIL	RIO CUIABA, SWAMP	16.4S	55.6W	8.9S	75.5W	50	LO	250	N	Y	19910409	183933	240	294	39	65	
83	99	BRAZIL	SWAMP, AGR.	16.3S	55.4W	8.8S	75.6W	40	LO	250	N	Y	19910409	183936	240	294	39	65	
83	100	BRAZIL	AGR, RIO SAO LOURENCO	16.0S	55.4W	8.7S	75.8W	40	LO	250	N	Y	19910409	183940	240	294	38	65	
83	101	BRAZIL	RONDONOPOLIS, R. LOURENCO	16.4S	54.6W	8.6S	76.0W	50	LO	250	N	Y	19910409	183946	240	294	38	65	
83	102	BRAZIL	RIO SAO LOURENCO, AGR.	16.1S	54.2W	8.5S	76.1W	50	LO	250	N	Y	19910409	183949	240	294	38	65	
83	103	BRAZIL	AGRICULTURE			8.4S	76.3W	60	LO	250	N	Y	19910409	183955	240	294	37	65	
83	104	BRAZIL	AGRICULTURE			8.3S	76.5W	60	LO	250	N	Y	19910409	184000	240	294	37	65	
83	105	BRAZIL	AGRICULTURE			8.2S	76.7W	50	LO	250	N	N	19910409	184005	240	294	37	65	
83	106	BRAZIL	AGRICULTURE			8.1S	76.9W	50	LO	250	N	N	19910409	184011	240	294	36	65	
83	107	BRAZIL	AGRICULTURE			8.0S	77.1W	40	LO	250	N	N	19910409	184016	240	294	36	65	
85	21	BRAZIL	AMAZON BASIN, E. MANAUS			2.7S	58.5W	90	LO	250	N	N	19910408	173649	245	291	62	49	
85	22	BRAZIL	AMAZON BASIN, E. MANAUS			2.8S	58.4W	80	LO	250	N	N	19910408	173651	245	291	62	49	
85	23	BRAZIL	AMAZON BASIN, E. MANAUS			2.9S	58.2W	80	LO	250	N	N	19910408	173655	245	291	62	49	
85	24	BRAZIL	AMAZON R. JUNCTION TAPAJO	2.7S	55.0W	5.0S	54.5W	80	LO	250	N	N	19910408	173805	245	292	58	49	
85	25	BRAZIL	AMAZON R. JUNCTION TAPAJO	2.3S	54.8W	5.2S	54.3W	80	LO	250	N	N	19910408	173810	245	292	57	49	
85	26	BRAZIL	AMAZON R. JUNCTION TAPAJO	2.3S	54.8W	5.3S	54.0W	80	LO	250	N	N	19910408	173816	245	292	57	49	
85	27	BRAZIL	AMAZON RIVER, E. MANAUS			6.1S	52.7W	90	LO	250	N	N	19910408	173841	245	292	55	49	
85	28	BRAZIL	COAST, CAMAMU AREA	14.0S	39.2W	14.0S	37.7W	80	LO	250	N	N	19910408	174317	245	291	38	49	
85	29	BRAZIL	COAST, BELMONTE AREA	15.9S	39.0W	14.3S	37.1W	70	LO	250	N	N	19910408	174328	245	291	37	49	



TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL	OR
86	100	BRAZIL	AMAZON RIVER, SEDIMENT		6.2N 50.0W	90	LO	250	N	N	19910408	155828	248	276	80	48
86	101	BRAZIL	AMAZON RIVER, SEDIMENT		5.4N 48.7W	90	LO	250	N	N	19910408	155853	246	279	79	48
86	102	BRAZIL	TREVARTHA'S MUMP AREA	5.5S 35.3W	3.7S 32.9W	40	LO	250	N	N	19910408	160355	245	291	60	48
86	103	BRAZIL	JOAO PESSOA AREA	6.8S 34.9W	5.6S 29.6W	60	LO	250	N	N	19910408	160458	245	292	56	48
89	67	BRAZIL	RIO NEGRO, RIO BRANCO	1.7S 61.4W	2.3S 59.3W	65	LO	250	U	Y	19910408	173634	245	291	64	49
89	68	BRAZIL	RIO NEGRO, RIO BRANCO	1.4S 61.8W	2.4S 59.0W	70	LO	250	U	Y	19910408	173640	245	291	63	49
89	69	BRAZIL	RIO JAUAPERI, RIO BRANCO	1.0S 61.7W	2.5S 58.9W	60	LO	250	U	Y	19910408	173642	245	291	63	49
89	70	BRAZIL	ROADS, AGR, HILLS		10.4S 44.9W	80	LO	250	U	Y	19910408	174106	245	292	46	49
89	71	BRAZIL	RIO GURGUEIA, ROADS	9.7S 45.0W	10.6S 44.5W	85	NV	250	U	Y	19910408	174114	245	292	46	49
89	72	BRAZIL	RIO GURGUEIA, L. PARNAGUA	9.9S 44.8W	10.8S 44.1W	85	NV	250	U	Y	19910408	174121	245	292	45	49
89	73	BRAZIL	RIO GURGUEIA, L. PARNAGUA	10.2S 44.7W	11.0S 43.7W	85	NV	250	U	Y	19910408	174128	245	292	45	49
89	74	BRAZIL	RIO SAO FRANCISCO	10.0S 42.2W	11.6S 42.6W	80	LO	250	U	N	19910408	174148	245	292	44	49
89	75	BRAZIL	RIO SAO FRANCISCO	11.0S 43.0W	11.9S 41.9W	85	LO	250	U	Y	19910408	174201	245	291	43	49
89	76	BRAZIL	RIO SAO FRANCISCO	10.8S 42.6W	12.0S 41.8W	85	LO	250	U	Y	19910408	174204	245	291	43	49
89	77	BRAZIL	RIO SAO FRANCISCO	11.8S 43.3W	12.4S 41.0W	75	LO	250	U	N	19910408	174218	245	291	42	49
89	78	BRAZIL	RIO CONTAS, SRA SINCORA	14.0S 41.5W	12.7S 40.3W	50	LO	250	U	Y	19910408	174230	245	291	41	49
89	79	BRAZIL	RIO CONTAS, SRA SINCORA	14.1S 41.1W	12.9S 40.1W	50	LO	250	U	Y	19910408	174235	245	291	41	49
89	80	BRAZIL	RIO CONTAS, HILLS, AGR	13.9S 40.8W	13.2S 39.3W	75	LO	250	U	Y	19910408	174248	245	291	40	49
89	81	BRAZIL	RIO CONTAS, HILLS, AGR	13.9S 40.4W	13.3S 39.1W	80	LO	250	U	Y	19910408	174252	245	291	40	49
89	82	BRAZIL	COAST	13.4S 39.0W	13.7S 38.3W	75	NV	250	U	N	19910408	174306	245	291	39	49
89	86	BRAZIL	DARK		25.5S 53.2W	5	LO	250	U	N	19910408	205908	244	280	5	51
90	116	BRAZIL	CAPE/RIO CASIPORE, COAST	3.5N 51.0W	4.7N 51.1W	70	LO	250	N	N	19910408	171555	243	274	62	18
90	118	BRAZIL	RIO ARAGUARI, AMAZON DEL.	1.2N 50.1W	3.4N 48.9W	70	LO	250	N	N	19910408	171637	243	276	60	18
90	119	BRAZIL	CAVIANA I., AMAZON DELTA	0.4N 49.6W	3.3W 48.7W	75	LO	250	N	N	19910408	171642	243	277	60	18
90	120	BRAZIL	AMAZON RIVER	0.8S 51.2W	2.2N 46.8W	70	LO	250	N	N	19910408	171718	243	278	57	18
90	121	BRAZIL	COAST	1.0S 47.0W	1.5N 45.8W	80	LO	250	U	N	19910408	171741	243	279	56	18
90	122	BRAZIL	COAST	1.0S 46.0W	1.4N 45.4W	80	LO	250	U	N	19910408	171744	243	279	56	18
91	43	BRAZIL	RIO NEGRO, RIO ICAMA, DARK	0.5N 67.5W	0.3W 69.4W	75	LO	250	U	N	19910405	193011	243	278	47	4
91	44	BRAZIL	RIO NEGRO, FOREST, DARK	0.5S 66.5W	0.1S 68.7W	75	LO	250	U	Y	19910405	193024	243	279	46	4
91	45	BRAZIL	RIO NEGRO, FOREST, V. DARK	0.0 67.0W	0.6S 67.9W	85	NV	250	U	Y	19910405	193039	243	279	45	4
91	46	BRAZIL	AMAZON R. FOREST, DARK	2.5S 65.5W	2.2S 65.1W	80	NV	250	N	N	19910405	193133	242	280	42	4
91	47	BRAZIL	AMAZON R. RIO JAPURA	3.0S 65.0W	2.3S 64.9W	70	LO	250	N	N	19910405	193136	242	280	42	4
91	48	BRAZIL	AMAZON RIVER	3.5S 64.5W	2.4S 64.8W	60	NV	250	N	N	19910405	193139	242	280	41	4
91	49	BRAZIL	AMAZON R. PARANA COPEA R.	4.0S 63.5W	3.1S 63.6W	50	NV	250	N	N	19910405	193201	242	280	40	4
91	50	BRAZIL	AMAZON RIVER, FOREST	3.5S 64.5W	3.2S 63.4W	50	LO	250	N	N	19910405	193206	242	280	40	4
91	51	BRAZIL	RIO PURUS, CLOUDS	5.0S 62.5W	4.6S 61.2W	85	LO	250	N	N	19910405	193247	242	281	37	4
91	52	BRAZIL	RIO MADEIRA, CLOUDS	5.5S 60.5W	5.0S 60.3W	80	NV	250	N	Y	19910405	193304	242	281	36	4
91	53	BRAZIL	RIO MADEIRA, CLOUDS	5.0S 60.5W	5.5S 59.4W	80	NV	250	N	Y	19910405	193322	242	281	35	4
91	54	BRAZIL	VERY DARK, CLOUDS		8.3S 54.4W	60	LO	250	U	N	19910405	193456	242	281	29	4
91	55	BRAZIL	VERY DARK, CLOUDS		9.9S 51.5W	70	LO	250	U	N	19910405	193550	242	281	26	4

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	LONG	MADIR LAT	LONG	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
91	56	BRAZIL	VERY DARK, CLOUDS			10.2S	50.9W	70	LO	250	U	N	19910405	193601	242	281	26	4
91	57	BRAZIL	VERY DARK, CLOUDS			10.6S	50.2W	60	LO	250	U	Y	19910405	193613	242	281	24	4
91	58	BRAZIL	VERY DARK, CLOUDS			10.7S	50.0W	60	LO	250	U	Y	19910405	193617	242	281	24	4
91	59	BRAZIL	VERY DARK, CLOUDS			11.1S	49.2W	70	LO	250	U	Y	19910405	193632	242	281	23	4
91	60	BRAZIL	RIO TOCANTINS, VERY DARK	11.5S	48.5W	11.7S	48.1W	60	NV	250	U	N	19910405	193663	242	281	22	4
91	61	BRAZIL	RIO TOCANTINS, VERY DARK	12.0S	48.5W	11.8S	47.9W	40	NV	250	U	N	19910405	193657	243	281	22	4
91	62	BRAZIL	R. TOCANTINS, R. PARANA-NO.	12.5S	48.0W	11.9S	47.7W	30	NV	250	U	N	19910405	193700	243	281	22	4
91	63	BRAZIL	VERY DARK, CLOUDS			12.0S	47.5W	60	LO	250	U	N	19910405	193704	243	281	21	4
91	64	BRAZIL	VERY DARK, STREAM			12.1S	47.3W	50	LO	250	U	N	19910405	193708	243	281	21	4
91	65	BRAZIL	VERY DARK, CLOUDS			12.3S	46.8W	30	LO	250	U	N	19910405	193716	243	281	21	4
91	66	BRAZIL	VERY DARK, CLOUDS			12.6S	46.2W	50	LO	250	U	N	19910405	193727	243	281	20	4
91	67	BRAZIL	VERY DARK, CLOUDS			13.7S	44.1W	30	LO	250	U	N	19910405	193805	243	281	17	4
91	68	BRAZIL	VERY DARK, CLOUDS			14.0S	43.4W	40	LO	250	U	N	19910405	193817	243	281	17	4
91	69	BRAZIL	RIO SAO FRANCISCO, V. DARK	14.5S	43.5W	14.2S	43.1W	40	NV	250	U	N	19910405	193823	243	281	16	4
91	70	BRAZIL	VERY DARK, HILLS, CLOUDS			14.6S	42.2W	30	LO	250	U	N	19910405	193839	243	280	15	4
91	71	BRAZIL	VERY DARK, HILLS, CLOUDS			14.8S	41.9W	60	LO	250	U	N	19910405	193845	243	280	15	4
91	72	BRAZIL	VERY DARK, HILLS, CLOUDS			16.1S	38.9W	30	LO	250	U	N	19910405	193937	243	280	12	4
91	73	BRAZIL	RIO DOCE, COAST	19.5S	40.0W	17.3S	36.3W	60	LO	250	U	N	19910405	194022	243	279	9	4
92	1	BRAZIL	TREWARHA HUMP AREA	5.0S	35.0W	6.7S	31.5W	50	LO	250	U	N	19910406	172210	243	284	39	18
92	2	BRAZIL	TREWARHA HUMP AREA	5.5S	35.4W	7.1S	30.8W	50	LO	250	N	N	19910406	172223	243	284	39	18
92	16	BRAZIL	AMAZON RIVER	2.5S	66.5W	0.1N	67.1W	70	LO	250	N	N	19910406	185152	243	280	54	19
92	17	BRAZIL	AMAZON RIVER	2.6S	65.5W	0.0N	67.0W	70	LO	250	N	N	19910406	185155	243	281	54	19
92	18	BRAZIL	AMAZON RIVER	3.2S	64.5W	0.1S	66.8W	60	LO	250	N	N	19910406	185159	243	281	53	19
92	19	BRAZIL	PARA PROV. FORESTRY, AGRI.			7.5S	53.9W	80	LO	250	N	N	19910406	185604	243	284	38	19
92	20	BRAZIL	PARA PROV., VRY CLOUDY			7.9S	53.3W	95	LO	250	N	N	19910406	185616	243	284	37	19
92	21	BRAZIL	PARA PROV., VRY CLOUDY			8.8S	51.5W	90	LO	250	N	N	19910406	185649	243	284	35	19
92	108	BRAZIL	NEAR MANAUS, AMAZON FLOOD			2.7S	60.4W	80	LO	250	N	N	19910407	181455	243	286	55	34
92	109	BRAZIL	AMAZON R., NEAR MANAUS			3.0S	59.9W	99	LO	250	N	N	19910407	181504	243	286	55	34
94	1	BRAZIL	AMAZON R. DELTA PLUME	0.5N	49.5W			40	HO	100	N	N						
94	2	BRAZIL	NE BRAZIL COAST	0.6S	47.0W			50	LO	100	N	Y						
94	3	BRAZIL	NE BRAZIL COAST	1.0S	46.0W			50	LO	100	N	Y						
94	4	BRAZIL	NE BRAZIL C., SAO LUIS	2.0S	44.0W			40	LO	100	N	N						
94	5	BRAZIL	NE BRAZIL C., PARNAIBA	2.5S	42.5W			40	LO	100	U	Y						
94	6	BRAZIL	NE BRAZIL C., PARNAIBA	2.5S	41.0W			35	LO	100	N	Y						
94	7	BRAZIL	NE BRAZIL C., FORTALEZA	3.5S	38.5W			40	LO	100	N	N						
94	8	BRAZIL	NE BRAZIL COAST	5.0S	36.5W			30	LO	100	N	N						
94	9	BRAZIL	NE BRAZIL C., NATAL	6.0S	35.5W			30	LO	100	N	Y						
94	10	BRAZIL	NE BRAZIL C., RECIFE	7.5S	35.0W			35	LO	100	U	Y						
94	11	BRAZIL	BRAZIL COAST SHIP WAKES	5.0S	36.5W			35	HO	100	N	N						
94	20	BRAZIL	AMAZON, JAPURA RIVERS	3.0S	65.0W			55	LO	100	N	N						

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	CENTER LONG	NADIR LAT	NADIR LONG	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL OR
94	21	BRAZIL	THUNDERSTORMS AMAZON BAS					75	LO	100	U	N					
94	22	BRAZIL	ARAGUAIA RIVER	13.0S	50.5W			40	LO	100	N	N					
94	23	BRAZIL	TOCANTINS RIVER BASIN	11.0S	48.5W			45	LO	100	N	N					
94	24	BRAZIL	LAND USE E. TOCANTINS R.					50	LO	100	N	N					
94	25	BRAZIL	SAO FRANCISCO R. BASIN	13.0S	43.5W			30	LO	100	N	N					
94	26	BRAZIL	SAO FRANCISCO R. MOUTH	10.5S	36.5W			65	HO	100	N	N					
94	27	BRAZIL	SAO FRANCISCO R. MOUTH	11.0S	36.0W			70	HO	100	U	U					
96	56	BRAZIL	AMAZON RIVER	2.0S	56.0W			70	LO	100	N	Y					
96	57	BRAZIL	AMAZON RIVER	2.0S	56.0W			70	LO	100	N	Y					
96	58	BRAZIL	SAO FRANCISCO RIVER	9.5S	40.5W			65	LO	100	N	Y					
96	59	BRAZIL	SAO FRANCISCO RIVER	8.5S	40.5W			55	LO	100	N	Y					
96	60	BRAZIL	SAO FRANCISCO RIVER	9.0S	40.0W			70	HO	100	N	Y					
96	61	BRAZIL	COAST NEAR CARAVELAS	18.0S	38.0W			65	HO	100	U	N					
98	88	BRAZIL	INTERIOR			4.0S	58.1W	90	LO	250	N	N	19910407	181538	243	287	53 34
98	89	BRAZIL				5.8S	55.0W	90	LO	250	N	N	19910407	181637	243	287	48 34
98	90	BRAZIL				6.3S	54.2W	90	LO	250	N	N	19910407	181652	243	287	48 34
98	91	BRAZIL	PANTANAL AREA			16.6S	57.9W	40	LO	250	N	N	19910407	195627	244	286	25 35
98	92	BRAZIL	PANTANAL AREA			17.1S	56.8W	70	LO	250	N	N	19910407	195648	244	286	24 35
98	93	BRAZIL	PANTANAL AREA			17.2S	56.4W	80	LO	250	N	N	19910407	195652	244	285	23 35
98	94	BRAZIL	SE. OF PANTANAL AREA			17.7S	55.4W	40	LO	250	N	N	19910407	195710	244	285	22 35
98	95	BRAZIL	SE. OF PANTANAL AREA			18.0S	54.6W	60	LO	250	N	N	19910407	195724	244	285	21 35
151	36	BRAZIL	RIO NEGRO	0.0	67.0W	0.6S	67.9W	50	NV	250	N	Y	19910406	193039	243	279	45 4
151	37	BRAZIL	RIO NEGRO	0.5S	66.5W	0.7S	67.7W	55	LO	250	N	Y	19910406	193044	243	279	45 4
151	38	BRAZIL	AMAZON RIVER	2.5S	66.5W	1.0S	67.1W	60	LO	250	N	N	19910406	193055	243	279	44 4
151	39	BRAZIL	AMAZON RIVER	2.5S	65.0W	1.8S	65.8W	70	LO	250	N	Y	19910406	193120	243	280	43 4
151	40	BRAZIL	AMAZON RIVER	3.5S	65.0W	1.9S	65.6W	70	LO	250	N	Y	19910406	193124	243	280	42 4
151	41	BRAZIL	AMAZON RIVER	3.5S	64.5W	2.1S	65.3W	70	LO	250	N	Y	19910406	193129	243	280	42 4
151	42	BRAZIL	RIO NEGRO, RIO JAPURA	1.0S	66.0W	2.5S	64.6W	70	LO	250	N	N	19910406	193142	242	280	41 4
151	43	BRAZIL	AMAZON RIVER	3.5S	64.0W	2.9S	63.9W	65	NV	250	N	Y	19910406	193156	242	280	40 4
151	44	BRAZIL	AMAZON RIVER	3.5S	64.0W	3.5S	62.8W	65	LO	250	N	Y	19910406	193216	242	280	39 4
151	45	BRAZIL	RIO MADEIRA	4.5S	60.5W	5.1S	60.1W	70	NV	250	N	N	19910406	193309	242	281	36 4
151	46	BRAZIL	RIO ARIQUANA, ROAD	7.5S	61.0W	5.9S	58.7W	70	LO	250	N	N	19910406	193334	242	281	34 4
151	47	BRAZIL	RIVER, AGRICULTURE			7.7S	55.5W	55	LO	250	N	N	19910406	193436	242	281	31 4
151	48	BRAZIL	RIO PEIXOTO DE AZEVEDO	10.0S	55.0W	8.3S	54.4W	50	LO	250	N	Y	19910406	193455	242	281	29 4
151	49	BRAZIL	SERRA DO CACHIMBO	10.0S	54.0W	8.5S	54.1W	50	LO	250	N	Y	19910406	193502	242	281	29 4
151	50	BRAZIL	RIO XINGU, AGRICULTURE	10.5S	53.0W	9.0S	53.1W	40	LO	250	N	Y	19910406	193520	242	281	28 4
151	51	BRAZIL	RIO XINGU, AGRICULTURE	10.0S	52.5W	9.1S	52.9W	50	NV	250	N	Y	19910406	193523	242	281	28 4
151	52	BRAZIL	RIO XINGU	9.0S	52.0W	9.2S	52.7W	30	NV	250	N	Y	19910406	193528	242	281	27 4
151	53	BRAZIL	RIO XINGU	9.0S	53.0W	9.3S	52.5W	30	NV	250	N	Y	19910406	193531	242	281	27 4
151	54	BRAZIL	RIVER, AGRICULTURE	8.0S	51.5W	9.6S	52.0W	35	LO	250	N	Y	19910406	193541	242	281	27 4

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		MADIR		CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM	EL	OR
				LAT	LONG	LAT	LONG												
151	55	BRAZIL	AGRICULTURE	10.0S	51.5W	9.7S	51.8W	20	NV	250	N	Y	19910405	193545	242	281	26	4	
151	56	BRAZIL	AGRICULTURE, RIO TAPIRAPE	10.5S	51.0W	9.9S	51.5W	15	NV	250	N	Y	19910405	193549	242	281	26	4	
151	57	BRAZIL	RIO ARAGUAIA	11.5S	51.0W	10.0S	51.2W	15	LO	250	N	Y	19910405	193555	242	281	26	4	
151	58	BRAZIL	RIO ARAGUAIA	10.0S	50.0W	10.5S	50.3W	15	NV	250	N	N	19910405	193612	242	281	25	4	
151	59	BRAZIL	RIO ARAGUAIA	10.0S	50.0W	10.6S	50.1W	15	NV	250	N	Y	19910405	193616	242	281	24	4	
151	60	BRAZIL	RIO LEVER, RIO ARAGUAIA	10.5S	50.0W	10.7S	49.9W	20	NV	250	N	Y	19910405	193619	242	281	24	4	
151	61	BRAZIL	RIO ARAGUAIA	11.5S	50.0W	10.9S	49.7W	20	NV	250	N	Y	19910405	193624	242	281	24	4	
151	62	BRAZIL	RIO ARAGUAIA	12.5S	50.0W	11.2S	49.1W	20	LO	250	N	Y	19910405	193635	242	281	23	4	
151	63	BRAZIL	RIO TOCANTINS	12.0S	49.0W	11.3S	48.9W	20	NV	250	N	Y	19910405	193638	242	281	23	4	
151	64	BRAZIL	RIO TOCANTINS	11.5S	48.5W	11.4S	48.7W	15	NV	250	N	Y	19910405	193642	242	281	23	4	
151	65	BRAZIL	RIO TOCANTINS	10.5S	48.0W	11.5S	48.4W	15	LO	250	N	Y	19910405	193647	242	281	22	4	
151	66	BRAZIL	RIO TOCANTINS	13.0S	48.5W	11.7S	48.1W	20	LO	250	N	Y	19910405	193653	242	281	22	4	
151	67	BRAZIL	RIO TOCANTINS	12.5S	48.0W	11.8S	47.9W	10	NV	250	N	Y	19910405	193657	243	281	22	4	
151	68	BRAZIL	HILLS, RIO TOCANTINS	12.0S	47.5W	11.9S	47.6W	15	NV	250	N	Y	19910405	193701	243	281	22	4	
151	69	BRAZIL	HILLS, SERRA NEGRA	11.0S	47.0W	12.1S	47.4W	20	LO	250	N	Y	19910405	193706	243	281	21	4	
151	70	BRAZIL	TOCANTINS R.-GERAL DO PA	14.5S	48.0W	12.4S	46.8W	20	LO	250	N	Y	19910405	193717	243	281	21	4	
151	71	BRAZIL	PARANA R.GERAL DO PARANA	14.0S	47.0W	12.5S	46.5W	20	LO	250	N	Y	19910405	193721	243	281	20	4	
151	72	BRAZIL	PARANA R.GERAL DO PARANA	13.5S	47.0W	12.6S	46.4W	20	NV	250	N	Y	19910405	193724	243	281	20	4	
151	73	BRAZIL	ESPIGAO RIDGE, ESPRAIAD S	12.5S	46.5W	12.7S	46.1W	30	NV	250	N	Y	19910405	193729	243	281	20	4	
151	74	BRAZIL	ESPIGAO RIDGE	11.5S	46.5W	12.9S	45.8W	40	LO	250	N	Y	19910405	193735	243	281	19	4	
151	75	BRAZIL	PARANA R.-ESPIGAO RIDGE	15.0S	46.5W	13.5S	44.5W	30	LO	250	N	Y	19910405	193757	243	281	18	4	
151	76	BRAZIL	AGRICULTURE-SMOKE	14.0S	45.5W	13.6S	44.4W	25	LO	250	N	Y	19910405	193800	243	281	18	4	
151	77	BRAZIL	RIO SAO FRANCISCO-SMOKE?	15.0S	45.0W	13.7S	44.0W	20	LO	250	N	Y	19910405	193806	243	281	18	4	
151	78	BRAZIL	RIO SAO FRANCISCO-SMOKE?	14.5S	44.5W	13.8S	43.9W	20	NV	250	N	Y	19910405	193809	243	281	17	4	
151	79	BRAZIL	SAO FRANCISCO R. AGRICUL	14.0S	44.0W	13.9S	43.7W	15	NV	250	N	Y	19910405	193812	243	281	17	4	
151	80	BRAZIL	SAO FRANCISCO R. AGRICUL	13.0S	44.0W	14.0S	43.5W	15	NV	250	N	Y	19910405	193815	243	281	17	4	
151	81	BRAZIL	SAO FRANCISCO R. AGRICUL	12.0S	44.0W	14.1S	43.2W	20	LO	250	N	Y	19910405	193821	243	281	17	4	
151	82	BRAZIL	SAO FRANCISCO R.-HILLS	12.5S	43.0W	14.2S	43.0W	20	LO	250	N	Y	19910405	193825	243	281	16	4	
151	83	BRAZIL	CAETITE-HILLS	13.5S	43.0W	14.3S	42.8W	15	NV	250	N	Y	19910405	193829	243	280	16	4	
151	84	BRAZIL	CAETITE-HILLS	14.5S	42.5W	14.5S	42.5W	15	NV	250	N	Y	19910405	193834	243	280	16	4	
151	85	BRAZIL	HILLS, RIVERS, JEQUIE	13.5S	40.5W	15.0S	41.3W	25	LO	250	N	Y	19910405	193855	243	280	14	4	
151	86	BRAZIL	POCOES, HILLS	14.5S	40.5W	15.1S	41.1W	30	LO	250	N	Y	19910405	193858	243	280	14	4	
151	87	BRAZIL	JEQUIE, COASTLINE	14.0S	39.5W	15.3S	40.7W	40	LO	250	N	Y	19910405	193905	243	280	14	4	
151	88	BRAZIL	MACEIO, NE COAST BRAZIL	9.5S	35.5W	16.2S	36.8W	25	HO	250	N	N	19910405	193940	243	280	12	4	
151	90	BRAZIL	COAST, RIO DOCE	19.0S	39.0W	17.1S	36.7W	60	LO	250	N	N	19910405	194018	243	279	9	4	
152	68	BRAZIL	AMAZON RIVER-CLOUDS	2.5S	64.5W	2.6S	62.4W	50	LO	250	N	N	19910406	185322	243	282	48	19	
152	69	BRAZIL	AMAZON RIVER-CLOUDS	3.5S	62.5W	2.9S	62.0W	85	LO	250	N	N	19910406	185331	243	283	48	19	
152	70	BRAZIL	RIO SAO FRANCISCO, GRIDS	13.0S	43.5W	13.4S	42.8W	25	NV	250	N	N	19910406	185928	243	284	25	19	
153	42	BRAZIL	PARANA R., SAO SIMAO RES	19.5S	52.0W	7.5S	77.8W	25	NV	250	N	N	19910409	184039	240	293	34	65	
153	43	BRAZIL	PARANA R., SOLTEIRA IS.R	20.0S	50.5W			25	LO	250	N	Y							

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		NADIR		CC		TL	FL	E	S	DATE	GMT	AL	AZ	SUN	EL	OR
				LAT	LONG	LAT	LONG													
153	44	BRAZIL	SAO SIMAO R. PARANAIBA R	19.0S	49.5W	7.4S	77.9W	25	LO	250	N	Y	19910409	184045	240	293	34	65		
153	45	BRAZIL	SAO SIMAO R. PARANAIBA R	18.0S	50.0W			30	LO	250	N	Y								
153	46	BRAZIL	TIETE R., VERMELHA RES.	20.5S	50.5W	7.3S	78.2W	20	NV	250	N	Y	19910409	184054	240	293	33	65		
153	47	BRAZIL	TIETE R., RIO GRANDE	21.0S	49.0W			25	LO	250	N	Y								
153	48	BRAZIL	RIO GRANDE, LAND PATTERN	21.0S	48.0W	7.2S	78.3W	45	LO	250	N	Y	19910409	184059	240	293	33	65		
153	49	BRAZIL	PROMISSAO RES., TIETE R.	22.5S	49.0W			35	LO	250	N	Y								
153	50	BRAZIL	AREA W. OF SAO PAULA	23.0S	47.5W	7.0S	78.6W	60	LO	250	N	N	19910409	184110	240	292	32	65		
153	51	BRAZIL	PARANA, PARANAPANEMA R.	22.5S	51.5W			45	LO	250	N	N								
153	52	BRAZIL	UBERLANDIA, AGRICULTURE	19.0S	49.0W	6.8S	78.9W	50	LO	250	U	N	19910409	184123	240	292	32	65		
153	53	BRAZIL	AG. LAND USE					70	HO	250	N	N								
153	54	BRAZIL	AG. LAND USE			6.6S	79.3W	65	HO	250	U	N	19910409	184139	240	292	31	65		
153	55	BRAZIL	PARANAIBA RIVER	18.5S	47.0W			60	HO	250	U	N								
153	56	BRAZIL	FURNAS RES., GRANDE R.	19.5S	46.0W	6.4S	79.6W	60	LO	250	N	N	19910409	184157	240	291	29	65		
153	57	BRAZIL	FURNAS RES., GRANDE R.	21.5S	45.5W			35	LO	250	N	Y								
153	58	BRAZIL	FURNAS RES., GRANDE R.	21.0S	44.5W	6.3S	79.7W	65	LO	250	N	Y	19910409	184203	240	291	29	65		
153	59	BRAZIL	SIERRA DO ES PINHACO	19.5S	43.5W	6.1S	80.1W	50	LO	250	N	N	19910409	184228	240	291	27	65		
153	60	BRAZIL	COAST NEAR CAPE FREE	22.5S	42.5W			65	LO	250	N	N								
153	61	BRAZIL	SERRA DA MANTIQUEIRA	21.0S	43.0W	6.0S	80.3W	35	LO	250	N	N	19910409	184238	240	290	27	65		
153	62	BRAZIL	SERRA DA MANTIQUEIRA	20.5S	42.5W			25	LO	250	N	Y								
153	63	BRAZIL	SERRA DA MANTIQUEIRA	20.5S	42.0W	5.9S	80.4W	30	LO	250	N	Y	19910409	184246	240	290	26	65		
153	64	BRAZIL	PARAIBA DO SUL RIVER	21.5S	41.5W			30	LO	250	N	Y								
153	65	BRAZIL	DOCE R. MOUTH, VITORIA	20.5S	40.5W	5.8S	80.5W	30	LO	250	N	Y	19910409	184256	240	290	26	65		
153	66	BRAZIL	PARAIBA DO SUL R. MOUTH	21.5S	41.0W			15	LO	250	N	Y								
153	67	BRAZIL	PARAIBA DO SUL R. MOUTH	22.5S	41.5W	5.7S	80.6W	45	LO	250	N	Y	19910409	184305	240	290	25	65		
153	68	BRAZIL	SAO TOME CAPE	22.5S	40.5W			55	LO	250	N	Y								
153	136	BRAZIL	PARANA RIVER	25.5S	54.5W	24.4S	56.0W	30	LO	250	N	Y	19910409	201909	247	286	16	66		
153	137	BRAZIL	PARANA RIVER	25.0S	54.0W			15	LO	250	N	Y								
153	138	BRAZIL	PARANA RIVER, GUAIRA	24.0S	54.0W	24.5S	55.6W	15	LO	250	N	Y	19910409	201916	247	286	15	66		
153	141	BRAZIL	PEPERI GUACO RIVER	26.5S	53.0W			35	LO	250	U	Y								
153	142	BRAZIL	URUGUAY RIVER	26.5S	52.5W	24.7S	54.6W	30	LO	250	U	Y	19910409	201932	246	285	14	66		
153	143	BRAZIL	PARANA RIVER, GUAIRA	24.0S	54.0W			15	LO	250	N	N								
153	144	BRAZIL	PIGUARI RIVER	24.0S	53.0W	24.9S	54.0W	55	LO	250	U	Y	19910409	201941	246	285	13	66		
153	145	BRAZIL	IGUACU RIVER	24.5S	53.5W			45	LO	250	U	Y								
153	146	BRAZIL	IVAI RIVER	24.0S	51.5W	25.1S	53.0W	35	LO	250	U	N	19910409	201956	246	285	13	66		
153	147	BRAZIL	NEAR PONTA GROSSA	24.5S	50.0W			30	LO	250	U	Y								
153	148	BRAZIL	IVAI RIVER	24.5S	51.0W	25.3S	52.4W	30	LO	250	U	Y	19910409	202005	246	284	12	66		
153	149	BRAZIL	NEAR PORTO UNIAO	25.6S	51.0W			30	LO	250	U	N								
153	150	BRAZIL	NEAR LAJES	27.0S	50.5W	25.4S	51.7W	25	LO	250	U	Y	19910409	202017	246	284	11	66		
153	151	BRAZIL	GREAL MTNS.	28.5S	50.5W			10	LO	250	U	N								
153	152	BRAZIL	COAST S. OF CRICITUMA	29.0S	50.0W	25.6S	50.7W	10	LO	250	U	Y	19910409	202031	246	283	10	66		

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL	OR
153	153	BRAZIL	CRICUMA, TUBARAO	29.0S 49.0W		25	LO	250	N	Y						
153	154	BRAZIL	DOS PATOS LAKE	31.0S 50.0W	25.8S 49.9W	60	LO	250	N	N	19910408	202044	246	283	9	86
153	155	BRAZIL	COAST S. OF TUBARAO	29.5S 49.0W		30	LO	250	N	N						
153	156	BRAZIL	SAINT CATHERINE ISLAND	27.6S 48.5W	26.0S 48.9W	20	LO	250	U	N	19910409	202059	246	283	8	86
91	104	BURMA	HENG TUAN MTNS., CLOUDS		27.7N 97.8E	30	LO	250	N	N	19910408	011722	246	97	26	8
96	33	BURMA	FOLDED RANGES			80	LO	100	N	N						
151	137	BURMA	IRRAWADDY RIVER DELTA	16.0N 94.0E	15.9N 94.6E	50	NV	250	N	Y	19910406	061518	244	218	77	11
151	138	BURMA	IRRAWADDY RIVER DELTA	16.5N 94.5E	15.8N 95.4E	40	LO	250	N	Y	19910406	061532	244	222	77	11
152	112	BURMA	RAMRE I.-COMBERMERE BAY	19.5N 93.5E	18.2N 91.5E	60	LO	250	N	N	19910407	053523	245	164	77	26
152	113	BURMA	COAST-DANSON BAY	17.0N 94.0E	17.6N 92.8E	40	LO	250	N	N	19910407	053546	245	160	78	26
152	114	BURMA	IRRAWADDY RIVER DELTA	16.5N 96.0E	16.3N 95.8E	15	NV	250	N	N	19910407	053639	245	176	80	26
152	115	BURMA	SALWEEN R.-CLOUDS-HAZE	18.0N 98.0E	15.9N 98.5E	75	LO	250	N	N	19910407	053651	245	180	80	26
152	116	BURMA	HEINZE R.-RESERVOIR	14.5N 98.0E	15.5N 97.5E	25	LO	250	N	Y	19910407	053708	245	187	81	26
152	118	BURMA	MALAY PEN.-TEWASSERIM R.	12.0N 99.0E	14.2N 100.3E	30	LO	250	N	N	19910407	053758	245	208	81	26
84	53	CAMEROON	CHARI R. LOWLANDS	11.5N 15.0E		15	NV	250	N	N						
84	54	CAMEROON	CHARI R. LOWLANDS	12.0N 15.0E		15	NV	250	N	N						
88	57	CAMEROON	L. CHAD,CHARI R/DELTA	13.0N 14.4E	12.0N 12.9E	15	LO	250	N	N	19910409	103616	246	117	80	60
88	60	CAMEROON	L. CHAD,CHARI R/DELTA	13.0N 14.4E	11.6N 13.7E	20	LO	250	N	Y	19910409	103632	246	117	81	60
88	61	CAMEROON	L. CHAD,CHARI R/DELTA	13.0N 14.5E	11.5N 13.8E	15	LO	250	N	Y	19910409	103634	246	118	81	60
88	63	CAMEROON	SOUTH LOBE L.CHAD, HAZE	12.6N 14.2E	11.2N 14.4E	25	LO	250	N	Y	19910409	103645	246	118	82	60
88	64	CAMEROON	CHARI RIVER,HAZE/SMOKE	12.4N 14.7E	11.1N 14.6E	10	LO	250	N	Y	19910409	103648	246	118	82	60
90	44	CAMEROON	LAKE CHAD, CHARI RIVER	12.5N 14.5E	10.0N 11.0E	65	LO	250	N	N	19910406	123239	243	260	71	15
153	0	J CAMEROON	MANDARA MOUNTAINS	11.0N 14.0E		15	LO	250	N	N						
153	0	L CAMEROON	MANDARA MOUNTAINS	10.5N 13.5E		30	LO	250	N	Y						
153	0	M CAMEROON	MANDARA MTS., BENOUE R.	9.5N 13.5E		25	LO	250	N	Y						
153	0	N CAMEROON	MANDARA MOUNTAINS	10.5N 14.0E		25	LO	250	N	Y						
153	0	P CAMEROON	SE OF MANDARA MTNS.	10.0N 13.5E		5	LO	250	N	Y						
9	24	CANARY ISLANDS	CLOUDS, VORTICES		24.6N 15.3W	99	LO	35	N	N	19910411	091113	245	96	33	90
9	25	CANARY ISLANDS	CLOUDS, VORTICES		24.3N 14.1W	95	HO	35	N	N	19910411	091131	245	96	34	90
97	55	CANARY ISLANDS	DK.IMAGE.CLOUD VORTEXES	28.2N 22.1W	28.1N 22.2W	90	LO	250	N	N	19910406	104339	246	110	44	14
97	56	CANARY ISLANDS	DK.IMAGE.CLOUD VORTEXES	28.0N 19.8W	28.0N 20.0W	90	LO	250	N	N	19910406	104412	246	112	46	14
97	58	CANARY ISLANDS	LAS PALMAS	28.0N 15.6W	27.2N 13.9W	70	LO	250	N	N	19910406	104543	246	117	52	14
97	59	CANARY ISLANDS	SANTA CRUZ, LAS PALMAS	28.1N 17.0W	27.1N 13.4W	70	LO	250	N	N	19910406	104550	246	117	52	14
98	35	CANARY ISLANDS	SANTA CRUZ	28.3N 16.6W	27.8N 16.7W	60	LO	250	N	N	19910407	100605	246	107	41	29
98	36	CANARY ISLANDS	LAS PALMAS	27.9N 15.6W	27.8N 16.3W	60	LO	250	N	N	19910407	100611	246	107	42	29
98	37	CANARY ISLANDS	FUERTEVENTURE	28.5N 14.0W	27.7N 15.6W	90	LO	250	N	N	19910407	100621	246	107	42	29
99	27	CANARY ISLANDS	CLOUD WAKES	27.0N 17.0W	23.4N 18.6W	70	NV	40	N	N	19910407	114507	246	123	62	30
151	239	CANARY ISLANDS	HIERRO-CLOUD VORTICES		27.9N 19.0W	80	LO	250	N	N	19910406	104426	246	113	47	14
77	63	CAPE VERDE ISLANDS	FOGO,BRAVA,IS.WAKES	14.9N 24.4W	15.3N 23.4W	0	LO	250	N	N	19910406	140253	244	216	78	16
77	64	CAPE VERDE ISLANDS	SANTIAGO	15.0N 23.6W	15.2N 23.2W	0	LO	250	N	N	19910406	140257	244	218	78	16

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	CENTER LON	MADIR LAT	MADIR LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	EL	OR
77	65	CAPE VERDE ISLANDS	SANTIAGO, MAIO ISLANDS	15.3N	23.4W	15.0N	22.8W	0	LO	250	N	N	19910406	140305	244	220	78	16
77	66	CAPE VERDE ISLANDS	BOA VISTA, CLD WAKE	16.1N	22.7W	14.9N	22.6W	20	LO	250	N	N	19910406	140308	244	221	78	16
77	67	CAPE VERDE ISLANDS	BOA VISTA, SAL, CLD WAKES	16.3N	22.8W	14.7N	22.1W	40	LO	250	N	N	19910406	140316	244	224	78	16
77	68	CAPE VERDE ISLANDS	BOA VISTA, SAL, CLD WAKES	16.1N	22.8W	14.0N	20.7W	60	LO	250	N	N	19910406	140342	244	231	77	16
86	70	CAPE VERDE ISLANDS	SANTO ANTAO & VICENTE	17.0N	25.2W	18.0N	25.7W	40	LO	250	N	N	19910408	124425	247	124	71	46
86	71	CAPE VERDE ISLANDS	SAO NICOLAU	16.5N	24.4W	17.5N	24.6W	50	LO	250	N	N	19910408	124445	247	125	72	46
86	72	CAPE VERDE ISLANDS	BOA VISTA & SAL	16.3N	22.9W	17.0N	23.3W	80	LO	250	N	N	19910408	124507	247	127	74	46
86	73	CAPE VERDE ISLANDS	BOA VISTA	16.3N	23.3W	16.9N	23.1W	40	LO	250	N	N	19910408	124511	247	127	74	46
86	74	CAPE VERDE ISLANDS	BOA VISTA	16.1N	22.8W	16.7N	22.7W	40	LO	250	N	N	19910408	124518	247	128	74	46
86	75	CAPE VERDE ISLANDS	SANTIAGO & MAIO	15.2N	23.7W	16.5N	22.3W	40	LO	250	N	N	19910408	124525	247	128	75	46
96	39	CAPE VERDE ISLANDS	ISLAND, CLOUD WAKES	16.5N	23.5W			40	HO	100	N	N						
96	40	CAPE VERDE ISLANDS	ISLAND, CLOUD WAKES	16.0N	23.0W			35	HO	100	N	N						
71	69	CARIBBEAN SEA	CIRRUS & LOW CLOUDS			15.8N	74.1W	25	LO	250	N	N	19910405	174753	244	232	74	3
76	81	CARIBBEAN SEA	UNIDENTIFIED CAYS			13.8N	86.2W	40	LO	250	N	N	19910408	164847	245	112	74	64
151	115	CAROLINE ISLANDS	PALAU ISLANDS	7.5N	134.0E	7.9N	134.2E	30	NV	250	N	N	19910406	044639	243	267	64	10
151	116	CAROLINE ISLANDS	NGULU ATOLL	7.5N	138.0E	5.3N	138.8E	70	LO	250	N	N	19910406	044806	243	273	60	10
71	62	CAYMAN ISLANDS	GRAND CAYMAN	19.5N	81.5W	19.3N	82.2W	15	NV	250	N	Y	19910405	174533	244	195	76	3
71	63	CAYMAN ISLANDS	GRAND CAYMAN	19.5N	81.5W	19.1N	81.8W	15	NV	250	N	Y	19910405	174540	244	197	76	3
71	64	CAYMAN ISLANDS	CAYMAN BRAC	19.5N	80.0W	18.8N	81.1W	20	NV	250	N	N	19910405	174552	244	200	76	3
72	13	CAYMAN ISLANDS	GRAND CAYMAN	19.5N	81.0W	18.9N	81.4W	15	NV	100	N	N	19910405	174547	244	197	76	3
13	3	CENTRAL AFRICAN REP.	CLOUDS			9.7N	19.3E	45	HO	35	N	N	19910410	095926	247	98	79	75
13	4	CENTRAL AFRICAN REP.	CLOUDS			8.6N	21.2E	50	LO	35	N	N	19910410	100002	248	94	81	75
77	27	CENTRAL AFRICAN REP.	BORDER AREA WITH ZAIRE	5.0N	20.0E	5.9N	18.4E	50	NV	250	N	N	19910406	123458	243	272	63	15
77	28	CENTRAL AFRICAN REP.	BORDER AREA WITH ZAIRE	5.0N	20.5E	5.4N	19.2E	50	NV	250	N	N	19910406	123513	243	273	62	15
77	29	CENTRAL AFRICAN REP.	BORDER AREA WITH ZAIRE			5.1N	19.8E	40	LO	250	N	N	19910406	123524	243	273	62	15
77	30	CENTRAL AFRICAN REP.	BORDER AREA WITH ZAIRE			4.9N	20.1E	50	LO	250	N	N	19910408	123529	243	274	61	15
86	41	CENTRAL AFRICAN REP.	OUHAM RIVER AREA	7.6N	18.0E	8.0N	18.5E	40	LO	250	N	N	19910408	111704	246	263	82	45
86	42	CENTRAL AFRICAN REP.	OUHAM RIVER AREA	7.3N	18.2E	7.8N	18.8E	50	LO	250	N	N	19910408	111710	246	264	82	45
86	43	CENTRAL AFRICAN REP.	CLDY, HAZY			6.9N	20.3E	60	LO	250	N	N	19910408	111739	246	271	80	45
86	44	CENTRAL AFRICAN REP.	CLDY, HAZY			6.9N	20.6E	70	LO	250	N	N	19910408	111742	246	271	80	45
86	45	CENTRAL AFRICAN REP.	CLDY, HAZY			6.5N	21.1E	80	LO	250	N	N	19910408	111753	246	273	80	45
86	46	CENTRAL AFRICAN REP.	CLDY, HAZY			5.8N	22.4E	90	LO	250	N	N	19910408	111818	246	277	78	45
86	47	CENTRAL AFRICAN REP.	CLDY, HAZY			5.5N	22.8E	90	LO	250	N	N	19910408	111826	245	278	78	45
86	48	CENTRAL AFRICAN REP.	CLDY, HAZY			5.4N	23.0E	90	LO	250	N	N	19910408	111829	245	278	77	45
86	49	CENTRAL AFRICAN REP.	CLDY, HAZY			5.3N	23.2E	90	LO	250	N	N	19910408	111834	245	278	77	45
86	50	CENTRAL AFRICAN REP.	CLDY, HAZY			5.1N	23.5E	90	LO	250	N	N	19910408	111839	245	279	77	45
86	51	CENTRAL AFRICAN REP.	CLDY, HAZY			4.9N	23.9E	90	LO	250	N	N	19910408	111847	245	280	76	45
86	52	CENTRAL AFRICAN REP.	CLDY, HAZY			4.6N	24.4E	90	LO	250	N	N	19910408	111856	245	280	76	45
86	53	CENTRAL AFRICAN REP.	CLDY, HAZY			4.4N	24.8E	90	LO	250	N	N	19910408	111903	245	281	75	45
86	54	CENTRAL AFRICAN REP.	CLDY, HAZY			4.3N	24.9E	90	LO	250	N	N	19910408	111908	245	281	75	45

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	CENTER LON	NADIR LAT	NADIR LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
86	55	CENTRAL AFRICAN REP.	CLDY,HAZY			4.2N	25.1E	90	LO	250	N	N	19910408	111909	245	281	76	45
86	56	CENTRAL AFRICAN REP.	CLDY,HAZY			4.1N	25.2E	90	LO	250	N	N	19910408	111912	245	282	75	45
86	57	CENTRAL AFRICAN REP.	CLDY,HAZY			4.0N	25.5E	80	LO	250	N	N	19910408	111917	245	282	74	45
86	58	CENTRAL AFRICAN REP.	CLDY,HAZY			3.8N	25.9E	80	LO	250	N	N	19910408	111924	245	282	74	45
152	17	CENTRAL AFRICAN REP.	OUHMAN R.-BOSSANGOA	6.5N	17.0E	6.4N	17.5E	25	NV	250	N	Y	19910408	123440	243	271	84	15
152	18	CENTRAL AFRICAN REP.	OUHMAN R.-BOSSANGOA	6.0N	18.0E	5.7N	18.6E	45	NV	250	N	Y	19910406	123502	243	272	63	15
153	0	V CENTRAL AFRICAN REP.	OUHAM RIVER	8.0N	17.5E			40	LO	250	N	Y						
153	0	W CENTRAL AFRICAN REP.	GRIBINGUI RIVER	8.5N	18.5E			30	LO	250	N	N						
153	0	X CENTRAL AFRICAN REP.	OUHAM, BAKASSA RIVERS	7.5N	17.5E			50	LO	250	N	N						
153	0	Y CENTRAL AFRICAN REP.	MPOKO RIVER	6.0N	17.5E			60	LO	250	N	N						
153	0	Z CENTRAL AFRICAN REP.	LAND PATTERNS, CLOUDS					80	LO	250	N	N						
153	0	A CENTRAL AFRICAN REP.	LAND PATTERNS, CLOUDS					80	LO	250	N	N						
153	0	B CENTRAL AFRICAN REP.	LAND PATTERNS, CLOUDS					80	LO	250	N	N						
8	10	CHAD	TIBESTI MTN. AREA	22.0N	15.0E	27.6N	15.4E	0	HO	35	N	N	19910410	063812	245	94	25	73
8	12	CHAD	TIBESTI MTNS AREA	21.0N	18.5E	27.2N	18.4E	40	HO	35	N	N	19910410	063857	245	96	28	73
8	14	CHAD	TIBESTI, OVEREXPOSED	26.5N	22.3E	26.5N	22.3E	0	HO	35	N	N	19910410	063955	245	98	32	73
8	16	CHAD	TIBESTI AREA	26.1N	24.5E	26.1N	24.5E	70	HO	35	N	N	19910410	064028	245	98	34	73
9	33	CHAD	LAKE CHAD,VRY CLDY	13.0N	14.0E	15.1N	10.5E	80	LO	35	N	N	19910411	091824	247	100	60	90
13	1	CHAD	LAKE IRO REGION	11.0N	19.0E	11.3N	16.3E	10	LO	35	N	N	19910410	095830	247	102	75	75
13	2	CHAD	LAKE IRO REGION	10.0N	19.0E	10.4N	18.0E	10	LO	35	N	N	19910410	095901	247	100	77	75
14	8	CHAD	TIBESTI MASSIF	21.0N	18.0E	22.4N	14.4E	0	HO	35	N	N	19910410	081733	246	103	47	74
14	9	CHAD	TIBESTI MASSIF	21.0N	18.0E	21.7N	16.6E	0	LO	35	N	N	19910410	081808	246	104	50	74
42	26	CHAD	TIBESTI SANDS	23.0N	15.0E	23.6N	12.2E	0	LO	35	N	N	19910411	073841	245	98	37	89
42	32	CHAD	TIBESTI MASSIF	21.0N	18.0E	22.3N	16.5E	10	LO	35	N	N	19910411	073950	246	99	41	89
42	37	CHAD	EASTERN TIBESTI MTNS.	21.0N	20.0E	20.9N	20.6E	5	LO	35	N	N	19910411	074057	246	100	45	89
45	33	CHAD	L.CHAD,CHARI R,CONGO BAS	9.0N	18.0E	15.2N	8.6E	70	HO	35	O	N	19910410	095810	247	105	67	75
45	34	CHAD	BODELE DES,L.CHAD,TIBEST	17.0N	17.0E	14.3N	10.4E	30	HO	35	N	N	19910410	095843	247	105	69	75
45	35	CHAD	L.CHAD,CHARI R,CONGO BAS	9.0N	19.0E	13.9N	11.1E	30	HO	35	N	N	19910410	095855	247	105	69	75
45	36	CHAD	BODELE DES,CHARI R,BASIN	14.0N	17.0E	13.8N	11.3E	40	HO	35	N	N	19910410	095659	247	105	70	75
45	37	CHAD	BODELE DES,TIBESTI MTNS	18.0N	17.0E	13.6N	11.8E	30	HO	35	N	N	19910410	095708	247	105	70	75
45	38	CHAD	LAKE CHAD	13.0N	15.0E	13.4N	12.1E	30	HO	35	N	N	19910410	095713	247	105	71	75
77	25	CHAD	LAKE CHAD AREA	13.0N	14.5E	8.2N	14.3E	40	LO	250	N	N	19910406	123341	243	266	68	15
77	26	CHAD	LAKE CHAD AREA	13.2N	14.5E	7.8N	14.9E	40	LO	250	N	N	19910406	123352	243	267	67	15
84	47	CHAD	LAKE CHAD, SOUTH BASIN	13.0N	15.0E			5	LO	250	N	Y						
84	48	CHAD	THE BIR LOUR PLATEAU	14.0N	16.0E			15	LO	250	N	Y						
84	49	CHAD	LAKE CHAD, NORTH BASIN	14.0N	14.0E			10	LO	250	N	N						
84	55	CHAD	CHARI RIVER	11.5N	15.5E			10	LO	250	N	N						
84	56	CHAD	CHARI RIVER	11.0N	15.5E			5	LO	250	N	Y						
84	57	CHAD	CHARI RIVER, HAZE	11.5N	15.5E			50	LO	250	N	N						
84	58	CHAD	CHARI RIVER, HAZE	10.5N	16.5E			50	LO	250	N	N						



TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	HAZIR LAT LON	CC TL FL E S	DATE	GMT	AL	SUN AZ EL OR
84	59	CHAD	CHARI RIVER, HAZE	10.0N 17.5E		40 LO 250 N N				
85	74	CHAD	TIBESTI, PIC TOUSIDE	21.0N 16.0E	21.1N 15.9E	0 LO 250 N N	19910409	085649	246	110 57 59
85	75	CHAD	TIBESTI, PIC TOUSIDE	21.0N 17.0E	21.0N 16.4E	0 LO 250 N N	19910409	085656	246	110 58 59
85	76	CHAD	TIBESTI MTNS.		20.9N 16.7E	0 LO 250 N N	19910409	085702	246	110 58 59
85	77	CHAD	TIBESTI MTNS.	20.5N 19.0E	20.8N 17.0E	0 LO 250 N N	19910409	085707	246	110 58 59
85	78	CHAD	TIBESTI MTNS.	20.5N 19.2E	20.6N 17.4E	0 LO 250 N N	19910409	085713	246	111 59 59
85	79	CHAD	TIBESTI MTNS.	20.6N 18.7E	20.5N 17.8E	0 LO 250 N N	19910409	085720	246	111 59 59
85	80	CHAD	TIBESTI, ENI KOUSSI	19.8N 18.5E	20.3N 18.2E	0 LO 250 N N	19910409	085727	246	111 60 59
85	81	CHAD	TIBESTI, ENI KOUSSI	19.3N 18.8E	20.1N 18.9E	0 LO 250 N N	19910409	085738	246	111 60 59
85	82	CHAD	AREA BTN TIBESTI-ENNEDI		19.9N 19.2E	0 LO 250 N N	19910409	085744	246	111 61 59
85	83	CHAD	AREA BTN TIBESTI-ENNEDI		19.4N 20.5E	0 LO 250 N N	19910409	085806	246	112 62 59
85	84	CHAD	AREA BTN TIBESTI-ENNEDI		19.3N 21.0E	0 LO 250 N N	19910409	085813	246	112 63 59
85	85	CHAD	AREA BTN TIBESTI-ENNEDI		19.0N 21.5E	0 LO 250 N N	19910409	085822	246	112 63 59
85	86	CHAD	AREA BTN TIBESTI-ENNEDI		18.9N 21.8E	0 LO 250 N N	19910409	085827	246	112 63 59
85	87	CHAD	SW. ENNEDI PLATEAU AREA	16.8N 22.0E	18.8N 22.1E	0 LO 250 N N	19910409	085832	246	113 64 59
85	88	CHAD	ENNEDI PLATEAU AREA		18.5N 22.8E	0 LO 250 N N	19910409	085845	246	113 65 59
85	89	CHAD	ENNEDI PLATEAU AREA	18.3N 23.4E		0 LO 250 N N	19910409	085855	246	113 65 59
86	29	CHAD	CAMEROON BORDER, LOGONE R	10.8N 15.2E	11.2N 12.5E	5 LO 250 N N	19910408	111513	246	190 85 45
86	30	CHAD	AREA NEAR BONGOR		10.6N 13.7E	5 LO 250 N N	19910408	111535	246	210 85 45
86	31	CHAD	AREA NEAR BONGOR		10.3N 14.2E	5 LO 250 N N	19910408	111545	246	219 85 45
86	32	CHAD	CHARI RIVER, S. NDJAMENA	11.3N 15.1E	10.2N 14.4E	0 LO 250 N N	19910408	111548	246	221 85 45
86	33	CHAD	CHARI RIVER, S. NDJAMENA	11.0N 15.5E	10.1N 14.6E	0 LO 250 N N	19910408	111552	246	225 85 45
86	34	CHAD	CHARI RIVER, S. NDJAMENA	10.8N 16.0E	10.0N 14.8E	10 LO 250 N N	19910408	111555	246	227 85 45
86	35	CHAD	CHARI RIVER, S. NDJAMENA	10.5N 16.5E	9.9N 14.9E	20 LO 250 N N	19910408	111558	246	230 85 45
86	36	CHAD	CLDY, HAZY		9.3N 16.1E	80 LO 250 N N	19910408	111620	246	244 84 45
86	37	CHAD	CLDY, HAZY		9.1N 16.4E	80 LO 250 N N	19910408	111625	246	247 84 45
86	38	CHAD	CLDY, HAZY		9.0N 16.7E	80 LO 250 N N	19910408	111630	246	250 84 45
86	39	CHAD	CLDY, HAZY		8.4N 17.7E	50 LO 250 N N	19910408	111649	246	258 83 45
86	40	CHAD	OUHAM RIVER AREA	8.4N 17.8E	8.2N 18.0E	60 LO 250 N N	19910408	111655	246	260 83 45
88	1	CHAD	DESERT, SAND STORM		19.2N 21.1E	0 LO 250 N N	19910409	085815	246	112 63 59
88	2	CHAD	DESERT, SAND STORM		19.2N 21.2E	0 LO 250 N N	19910409	085817	246	112 63 59
88	3	CHAD	SAND STORM, LINEAR OUTCR.		19.1N 21.4E	0 LO 250 N N	19910409	085820	246	112 63 59
88	4	CHAD	SAND STORM, LINEAR OUTCR.		19.0N 21.5E	0 LO 250 N N	19910409	085822	246	112 63 59
88	5	CHAD	SAND ST. DEPR. DU MOURDI		19.0N 21.6E	0 LO 250 N N	19910409	085824	246	112 63 59
88	6	CHAD	SAND ST. DEPR. DU MOURDI		19.0N 21.7E	0 LO 250 N N	19910409	085826	246	112 63 59
88	7	CHAD	SAND ST. DEPR. DU MOURDI	18.5N 23.8E	18.9N 21.8E	0 LO 250 N N	19910409	085828	246	112 63 59
88	8	CHAD	SAND ST. DEPR. DU MOURDI	18.5N 23.5E	18.8N 22.0E	0 LO 250 N N	19910409	085831	246	112 64 59
88	59	CHAD	EAST LOBE LAKE CHAD, DUST	13.5N 14.5E	11.8N 13.3E	25 LO 250 N N	19910409	103625	246	117 80 60
88	62	CHAD	CENTRAL L. CHAD, DUST	13.2N 14.3E	11.4N 14.0E	60 LO 250 N N	19910409	103637	246	118 81 60
88	65	CHAD	CHARI RIVER, HAZE/SMOKE	12.2N 15.0E	11.0N 14.9E	30 LO 250 N N	19910409	103653	246	118 82 60

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LAT	CENTER LON LON	NADIR LAT LAT	NADIR LON LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
88	66	CHAD	CHARI RIVER,HAZE/SMOKE	11.7N	15.4E	10.8N	15.2E	25	LO	250	N	Y	19910409	103659	246	118	83	60
88	67	CHAD	CHARI RIVER,HAZE/SMOKE	11.5N	15.4E	10.5N	15.8E	20	LO	250	N	Y	19910409	103710	246	119	83	80
88	68	CHAD	CHARI RIVER,HAZE,MINING	11.2N	15.7E	10.3N	16.1E	0	LO	250	N	Y	19910409	103715	246	119	84	80
88	69	CHAD	CHARI RIVER,HAZE/SMOKE	10.7N	16.3E	10.1N	16.5E	30	LO	250	N	Y	19910409	103723	246	119	84	60
88	70	CHAD	CHARI RIVER,HAZE/SMOKE	10.5N	17.0E	10.0N	16.7E	30	LO	250	N	Y	19910409	103727	246	119	84	60
88	71	CHAD	CHARI RIVER,HAZE/SMOKE	10.2N	17.5E	9.9N	16.9E	60	LO	250	N	Y	19910409	103731	246	120	85	60
89	109	CHAD	TIBESTI AREA-WEST SIDE	21.4N	15.6E	21.6N	14.7E	0	LO	250	N	Y	19910409	085628	246	109	56	59
89	110	CHAD	TIBESTI AREA-WEST SIDE	21.4N	15.9E	21.5N	14.8E	0	LO	250	N	Y	19910409	085631	246	109	56	59
89	111	CHAD	TIBESTI AREA-WEST SIDE	21.4N	16.3E	21.5N	15.0E	0	LO	250	N	Y	19910409	085633	246	110	56	59
89	112	CHAD	TIBESTI AREA-WEST SIDE	21.6N	16.4E	21.4N	15.1E	0	LO	250	N	Y	19910409	085635	246	110	56	59
89	113	CHAD	MASSIF D'ABO,N.TIBESTI	21.7N	16.2E	21.4N	15.2E	0	LO	250	N	Y	19910409	085637	246	110	56	59
89	114	CHAD	TIBESTI MTNS,PIC TOUSIDE	21.0N	16.5E	21.0N	16.4E	0	NV	250	N	Y	19910409	085657	246	110	57	59
89	115	CHAD	TIBESTI MTNS,VOLC.CRATER	20.9N	16.9E	20.9N	16.6E	0	NV	250	N	Y	19910409	085700	246	110	58	59
89	116	CHAD	TIBESTI MTNS,OLD CRATER	20.4N	17.4E	20.9N	16.7E	0	LO	250	N	Y	19910409	085702	246	110	58	59
89	117	CHAD	TIBESTI,TARSO TOON VOLC.	20.8N	17.7E	20.8N	16.8E	0	LO	250	N	Y	19910409	085704	246	110	58	59
89	118	CHAD	TIBESTI,TARSO TOON VOLC.	21.0N	17.3E	20.8N	17.0E	0	NV	250	N	Y	19910409	085707	246	110	58	59
89	119	CHAD	TIBESTI,NO.PIC TOUSIDE	21.4N	16.7E	20.7N	17.2E	0	NV	250	N	Y	19910409	085710	246	110	58	59
89	120	CHAD	TIBESTI,NE. PIC TOUSIDE	21.7N	17.1E	20.6N	17.3E	0	LO	250	N	Y	19910409	085712	246	110	58	59
89	121	CHAD	TIBESTI,WADI ZUMRI	21.1N	17.2E	20.6N	17.4E	0	NV	250	N	Y	19910409	085714	246	111	58	59
89	122	CHAD	TIBESTI, EAST SLOPE	21.0N	19.0E	20.6N	17.6E	0	LO	250	N	Y	19910409	085716	246	111	59	59
90	31	CHAD	TIBESTI MTNS,EMI KOUSSI	19.7N	18.7E	18.4N	17.3E	0	LO	250	N	Y	19910406	105359	245	180	77	14
90	32	CHAD	TIBESTI,AOROUNGA CRATER	19.1N	19.4E	18.3N	17.6E	0	LO	250	N	Y	19910406	105404	245	182	78	14
90	33	CHAD	TIBESTI MTNS,PIC TOUSIDE	21.0N	16.5E	17.8N	18.8E	0	LO	250	N	Y	19910406	105425	245	188	78	14
94	93	CHAD	TIBESTI, PIC TOUSIDE V.	21.0N	17.0E			0	LO	100	N	Y						
94	94	CHAD	TIBESTI, EMI KOUSSI VOL.	20.5N	17.5E			0	LO	100	N	Y						
94	95	CHAD	TIBESTI, KEGUEUR TERBI	21.5N	18.0E			0	LO	100	N	Y						
95	50	CHAD	DUST STORM,WIND STREAKS			21.0N	10.7E	0	LO	250	N	Y	19910406	105208	245	154	74	14
95	51	CHAD	DUST STORM,WIND STREAKS			20.9N	10.9E	0	LO	250	N	Y	19910406	105210	245	155	74	14
95	52	CHAD	DUST STORM,WIND STREAKS			20.9N	11.0E	0	LO	250	N	Y	19910406	105212	245	155	74	14
95	53	CHAD	DUST STORM			20.8N	11.1E	0	LO	250	N	Y	19910406	105214	245	155	74	14
95	54	CHAD	DUST STORM			20.7N	11.5E	0	LO	250	N	Y	19910406	105220	245	156	74	14
95	55	CHAD	TIBESTI MTNS.	21.0N	16.5E	20.3N	12.4E	0	LO	250	N	Y	19910406	105236	245	160	75	14
95	56	CHAD	LAKE CHAD	13.0N	13.6E	20.0N	13.2E	20	LO	250	N	Y	19910406	105249	245	162	75	14
95	57	CHAD	SAND, LONGITUDINAL DUNES			19.6N	14.4E	0	LO	250	N	Y	19910406	105310	245	167	76	14
95	58	CHAD	SAND, LONGITUDINAL DUNES			19.5N	14.6E	0	LO	250	N	Y	19910406	105313	245	168	76	14
95	59	CHAD	SAND, LONGITUDINAL DUNES			19.1N	15.6E	0	LO	250	N	Y	19910406	105329	245	172	77	14
95	60	CHAD	SAND, LONGITUDINAL DUNES			19.0N	15.7E	0	LO	250	N	Y	19910406	105332	245	173	77	14
95	61	CHAD	SAND, LONGITUDINAL DUNES			19.0N	15.9E	0	LO	250	N	Y	19910406	105335	245	174	77	14
95	62	CHAD	TIBESTI MTNS.	20.0N	18.6E	18.7N	16.6E	0	LO	250	N	Y	19910406	105346	245	177	77	14
95	63	CHAD	TIBESTI,EMI KOUSSI	19.8N	18.6E	18.3N	17.7E	0	LO	250	N	Y	19910406	105405	245	183	78	14

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	CENTER LON	NADIR LAT	NADIR LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL	OR
95	64	CHAD	TIBESTI MTNS., WIND STRKS.	18.5N	19.0E	18.1N	18.0E	0	LO	250	N	N	19910406	105410	245	184	78	14
95	65	CHAD	WIND STRKS., NR TIBESTI	19.0N	19.5E	18.1N	18.1E	0	LO	250	N	N	19910406	105412	245	185	78	14
95	66	CHAD	ERG DU DJOURAB, SALT FLTS	17.5N	19.0E	18.0N	18.3E	0	LO	250	N	N	19910406	105415	245	186	78	14
95	67	CHAD	LARGE SALT FLATS	17.3N	18.6E	17.7N	19.0E	0	LO	250	N	N	19910406	105428	245	190	78	14
95	68	CHAD	LARGE SALT FLATS	17.0N	18.3E	17.6N	19.3E	0	LO	250	N	N	19910406	105433	245	191	78	14
95	69	CHAD	LARGE SALT FLATS	17.0N	18.2E	17.5N	19.5E	0	LO	250	N	N	19910406	105437	245	193	78	14
95	70	CHAD	ENNEDI PLATEAU	17.2N	22.5E	17.2N	20.2E	10	LO	250	N	N	19910406	105449	245	197	78	14
95	71	CHAD	ENNEDI PLATEAU	17.0N	23.0E	17.0N	20.6E	10	LO	250	N	N	19910406	105455	245	199	78	14
95	72	CHAD	ENNEDI PLATEAU	17.5N	24.0E	16.8N	21.1E	0	LO	250	N	N	19910406	105504	245	202	78	14
95	73	CHAD	ENNEDI PLATEAU			16.4N	21.9E	5	LO	250	N	N	19910406	105518	245	207	78	14
95	74	CHAD	CHAD, SUDAN BORDER	16.0N	23.1E	16.0N	22.9E	0	NV	250	N	N	19910406	105535	244	212	78	14
95	75	CHAD	CHAD, SUDAN BORDER	15.7N	23.0E	15.8N	23.4E	10	LO	250	N	N	19910406	105544	244	215	78	14
96	78	CHAD	TIBESTI, PIC TOUSIDE	21.0N	17.0E			0	LO	100	N	N						
96	79	CHAD	TIBESTI, EMI KOUSSI	20.5N	18.5E			0	LO	100	N	N						
96	80	CHAD	DESERT E. OF TIBESTI	19.5N	19.5E			0	LO	100	N	Y						
96	81	CHAD	DESERT E. OF TIBESTI	20.5N	20.0E			0	LO	100	N	Y						
96	82	CHAD	DESERT N. OF ENNEDI PLAT	19.0N	22.0E			0	LO	100	N	N						
96	83	CHAD	DESERT N. OF ENNEDI PLAT	18.0N	22.0E			0	LO	100	N	Y						
96	84	CHAD	ENNEDI P., MOURDI DEPRES	18.0N	23.0E			5	LO	100	N	Y						
96	85	CHAD	MOURDI DEPRESSION, DUST	18.5N	23.5E			5	LO	100	N	Y						
97	75	CHAD	TIBESTI MTNS.	21.0N	16.5E	21.5N	9.1E	0	LO	250	N	N	19910406	105141	245	149	72	14
97	76	CHAD	TIBESTI MTNS.	20.4N	18.0E	20.5N	12.1E	0	LO	250	N	N	19910406	105230	245	158	74	14
97	77	CHAD	TIBESTI MTNS.	21.0N	16.5E	20.2N	12.7E	0	LO	250	N	N	19910406	105241	245	160	75	14
97	78	CHAD	TIBESTI MTNS.	21.0N	18.0E	19.3N	15.0E	0	LO	250	N	N	19910406	105320	245	169	76	14
97	79	CHAD	TIBESTI MTNS., EMI KOUSSI	19.8N	18.5E	18.8N	18.3E	0	LO	250	N	N	19910406	105342	245	175	77	14
97	80	CHAD	ENNEDI PLAT.	17.2N	22.8E	17.9N	18.4E	10	LO	250	N	N	19910406	105418	245	186	78	14
97	81	CHAD	ENNEDI PLAT.	17.0N	23.0E	17.7N	19.1E	10	LO	250	N	N	19910406	105429	245	189	78	14
97	82	CHAD	ENNEDI PLAT.	17.0N	23.0E	17.4N	19.6E	0	LO	250	N	N	19910406	105438	245	192	78	14
98	50	CHAD	TIBESTI MTNS., MT. KOUSSI	18.9N	18.6E	19.6N	16.2E	0	LO	250	N	N	19910407	101440	245	139	73	29
98	51	CHAD	TIBESTI MTNS., EMI KOUSSI	19.8N	18.5E	19.3N	17.0E	0	LO	250	N	N	19910407	101453	245	141	74	29
98	52	CHAD	TIBESTI MTNS., PIC TOUSID	21.0N	16.4E	19.0N	17.9E	0	LO	250	N	N	19910407	101508	245	143	75	29
98	53	CHAD	SE. OF TIBESTI MTNS.			18.8N	18.2E	0	LO	250	N	N	19910407	101514	245	144	75	29
98	54	CHAD	BODELE DESERT			18.5N	19.1E	0	LO	250	N	N	19910407	101529	245	146	76	29
98	55	CHAD	ENNEDI PLATEAU			18.3N	19.4E	0	LO	250	N	N	19910407	101534	245	147	76	29
98	56	CHAD	ENNEDI PLATEAU			17.8N	20.8E	0	LO	250	N	N	19910407	101558	245	152	77	29
151	254	CHAD	NEAR TIBESTI			18.2N	17.8E	0	LO	250	N	N	19910406	105407	245	183	78	14
151	255	CHAD	ERG DU DJOURAB	16.5N	18.5E	17.5N	19.4E	10	LO	250	N	N	19910406	105434	245	191	78	14
151	256	CHAD	ENNEDI PLAT.-HABILI HILLS	16.0N	23.0E	16.3N	22.2E	15	LO	250	N	N	19910406	105524	245	208	78	14
151	257	CHAD	WADI UMM SAQAT	15.5N	23.0E	15.5N	23.9E	25	LO	250	N	N	19910406	105553	244	218	78	14
153	0	Q	CHAD	CHARI RIVER BASIN	10.0N	16.0E		5	LO	250	N	Y						

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	CENTER LON	MADIR LAT	MADIR LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL	OR
153	0	R CHAD	LOGONE RIVER	10.5N	15.5E			10	LO	250	N	Y						
153	0	S CHAD	AREA WEST OF LOGONE R.	9.5N	14.5E			45	LO	250	N	Y						
153	0	T CHAD	CHARI RIVER BASIN	10.5N	16.5E			30	LO	250	N	N						
10	15	CHILE	S. VIEW OF ANDES MTS.			21.2S	65.1W	60	HO	35	N	N	19910410	193822	247	296	34	81
39	11	CHILE	ATACAMA DESERT	25.0S	70.0W	25.7S	73.3W	15	LO	35	N	N	19910410	211601	246	289	18	82
39	12	CHILE	ATACAMA DESERT	25.0S	69.0W	25.8S	73.1W	5	LO	35	N	N	19910410	211604	246	289	18	82
39	13	CHILE	ATACAMA DESERT	24.0S	69.0W	25.8S	72.9W	5	LO	35	N	N	19910410	211607	246	288	18	82
39	14	CHILE	ATACAMA DESERT	23.0S	70.0W	26.0S	72.2W	20	LO	35	N	N	19910410	211618	246	288	17	82
39	15	CHILE	VIEW SOUTH OF ANDES MTS.	29.0S	69.0W	26.1S	71.7W	35	LO	35	N	N	19910410	211625	246	288	17	82
39	16	CHILE	VIEW SOUTH OF ANDES MTS.	27.0S	69.0W	26.2S	71.2W	45	LO	35	N	N	19910410	211633	246	288	16	82
39	17	CHILE	ATACAMA DESERT, ANDES	25.0S	69.0W	26.2S	71.0W	25	LO	35	N	N	19910410	211636	246	288	16	82
39	18	CHILE	ANDES MTS., SOCOMPA VOL.	25.0S	68.0W	26.3S	70.8W	5	LO	35	N	N	19910410	211639	246	287	16	82
39	19	CHILE	ANDES MTS., SOCOMPA VOL.	26.0S	68.0W	26.3S	70.7W	5	LO	35	N	N	19910410	211641	246	287	16	82
39	20	CHILE	ANDES MTS., ATACAMA DES.	26.0S	69.0W	26.3S	70.4W	5	LO	35	N	N	19910410	211645	246	287	15	82
39	21	CHILE	ANDES MTS., ATACAMA DES.	26.0S	69.0W	26.4S	70.3W	5	LO	35	N	N	19910410	211647	246	287	15	82
39	22	CHILE	ANDES MTS., ATACAMA DES.	24.0S	70.0W	26.4S	70.0W	5	LO	35	N	N	19910410	211651	246	287	15	82
153	78	CHILE	ATACAMA DESERT, ARICA	19.5S	70.5W			10	LO	250	N	N						
153	79	CHILE	ATACAMA DESERT, IQUIQUE	20.0S	70.5W	18.9S	72.6W	10	LO	250	N	Y	19910409	201439	247	293	33	66
153	80	CHILE	ATACAMA DESERT, IQUIQUE	20.0S	68.5W			10	LO	250	N	Y						
153	82	CHILE	UYUNI SALAR, ATACAMA D.	20.5S	68.5W			0	LO	250	N	Y						
153	83	CHILE	ATACAMA DES., TOCOPILLA	21.0S	69.5W	19.3S	71.6W	5	LO	250	N	Y	19910409	201456	247	292	32	66
153	84	CHILE	ATACAMA DES., TOCOPILLA	22.0S	70.5W			15	LO	250	N	Y						
153	85	CHILE	UYUNI, ASCOTAN SALARS	21.5S	68.5W	19.5S	71.0W	0	LO	250	N	Y	19910409	201506	247	292	31	66
153	86	CHILE	ATACAMA DES., LOA RIVER	21.5S	69.5W			0	LO	250	N	Y						
153	87	CHILE	ATACAMA DES., LOA RIVER	21.0S	70.0W	19.7S	70.4W	15	LO	250	N	Y	19910409	201515	247	292	31	66
153	88	CHILE	ATACAMA DES., CALAMA	22.0S	69.0W	20.0S	69.8W	0	LO	250	N	Y	19910409	201526	247	292	30	66
153	89	CHILE	ATACAMA DES., MIRAJE S.	22.5S	70.0W			10	LO	250	N	Y						
153	90	CHILE	ATACAMA D., ANTOFAGASTA	24.0S	70.5W	20.1S	69.4W	30	LO	250	N	Y	19910409	201533	247	291	29	66
153	91	CHILE	ATACAMA, ARIZARO SALARS	24.5S	69.0W			0	LO	250	N	Y						
153	95	CHILE	PEDERNALES S., C. ANDES	27.0S	69.0W			30	HO	250	N	Y						
153	96	CHILE	PEDERNALES S., C. ANDES	27.0S	70.0W	20.5S	68.2W	30	HO	250	N	Y	19910409	201552	247	291	28	66
153	97	CHILE	CHILE COAST, CEN. ANDES	27.5S	71.0W			40	HO	250	N	Y						
153	98	CHILE	CHILE C., CAPE BASCUNAN	31.5S	71.0W	20.8S	67.5W	65	HO	250	N	N	19910409	201605	247	291	27	66
153	101	CHILE	ATACAMA S., CEN. ANDES	23.0S	68.0W			5	LO	250	N	N						
40	7	CHINA	VIEW E. TOWARD TERMINAT.			28.5N	115.0E	85	HO	35	N	N	19910410	220743	243	81	1	83
40	8	CHINA	CLOUDS OVER E. CHINA SEA			28.6N	118.3E	85	LO	35	N	N	19910410	220831	243	83	4	83
72	81	CHINA	HST-HSIA PANG MA MNTS.	28.5N	86.0E	25.3N	83.7E	70	LO	100	N	Y	19910406	011350	246	89	12	8
72	82	CHINA	TIBET PLATEAU	29.0N	87.0E	25.4N	84.3E	85	LO	100	N	Y	19910406	011359	246	89	13	8
72	83	CHINA	NA-MU LAKE	31.5N	91.0E	26.1N	87.4E	20	HO	100	N	Y	19910406	011447	246	91	16	8
72	84	CHINA	CH'L-LIN LAKE	32.0N	89.5E	26.2N	87.8E	15	HO	100	N	Y	19910406	011453	246	91	16	8

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		MADIR		CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN	EL	OR
				LAT	LONG	LAT	LONG												
72	85	CHINA	TIBET PLATEAU-CHEKU LAKE	28.5N	92.0E	26.3N	88.7E	45	LO	100	N	Y	19910406	011506	246	91	17	8	
72	86	CHINA	BRAMAPUTRA RIVER	29.5N	91.0E	26.6N	90.3E	15	LO	100	N	Y	19910406	011530	246	92	19	8	
72	87	CHINA	PANORAMA TIBETAN PLATEAU			26.8N	91.2E	30	HO	100	N	Y	19910406	011544	246	93	19	8	
72	89	CHINA	CHE KU LAKE-HIMALAYAS	28.5N	92.5E	27.2N	94.1E	25	LO	100	N	Y	19910406	011628	246	94	22	8	
72	90	CHINA	NIEN CH'ING T'ANG KU MNT	31.0N	93.0E	27.4N	95.1E	20	LO	100	N	Y	19910406	011643	246	95	23	8	
72	91	CHINA	NIEN CH'ING T'ANG KU MNT	29.5N	90.5E	27.5N	95.7E	10	HO	100	N	Y	19910406	011651	246	95	24	8	
72	92	CHINA	GREAT HIMALAYA RANGE			28.1N	101.9E	25	HO	100	N	Y	19910406	011823	246	99	29	8	
72	93	CHINA	GREAT HIMALAYA RANGE			28.2N	102.3E	30	HO	100	N	Y	19910406	011829	246	99	30	8	
72	94	CHINA	FOLDED MOUNTAINS			28.3N	104.0E	50	LO	100	N	Y	19910406	011853	246	100	31	8	
72	95	CHINA	FOLDED MOUNTAINS			28.3N	104.7E	70	HO	100	N	Y	19910406	011904	246	101	32	8	
72	96	CHINA	FOLDED MOUNTAINS-KARST			28.4N	105.8E	50	LO	100	N	Y	19910406	011920	246	101	33	8	
72	97	CHINA	FOLDED MOUNTAINS-KARST			28.5N	109.5E	50	LO	100	N	Y	19910406	012013	246	104	36	8	
91	101	CHINA	HIMALAYA RANGE, DOGEN L.	28.0N	89.0E	26.1N	87.6E	15	LO	250	N	Y	19910406	011449	246	91	16	8	
91	102	CHINA	HIMALAYA RA, CHAMLING L.	28.0N	88.5E	26.1N	87.6E	30	LO	250	N	Y	19910406	011450	246	91	16	8	
91	103	CHINA	HIMALAYAS, BHAMAPUTRA R.	27.5N	87.5E	26.2N	88.0E	15	LO	250	N	Y	19910406	011455	246	91	17	8	
91	105	CHINA	CHIUNG L, ANNING R, YALONG	28.0N	102.0E	27.8N	98.6E	50	LO	250	N	Y	19910406	011734	246	97	27	8	
91	106	CHINA	CHIUNG L, ANNING R, YALONG	27.5N	102.0E	27.9N	98.1E	40	LO	250	N	Y	19910406	011741	246	97	27	8	
91	107	CHINA	LINGDING BAY-SE PANORAMA	24.0N	113.0E	28.4N	106.2E	30	LO	250	U	N	19910406	011926	246	102	34	8	
91	108	CHINA	SE PANORAMA-COAST, V. DARK			28.4N	106.6E	50	LO	250	U	N	19910406	011932	246	102	34	8	
91	109	CHINA	VERY DARK, CLOUDS			28.4N	107.4E	50	LO	250	U	N	19910406	011943	246	103	35	8	
92	118	CHINA	NE.MT. EVEREST	28.4N	87.2E	28.5N	87.8E	0	NV	250	N	N	19910406	013622	247	94	22	39	
92	119	CHINA	NE.MT. EVEREST			28.5N	88.9E	20	LO	250	N	N	19910406	013638	248	94	23	39	
93	28	CHINA	HIMALAYAS, TIBET PL.	28.5N	85.5E	25.1N	83.1E	45	LO	250	N	N	19910406	011340	246	88	12	8	
93	29	CHINA	HIMALAYAS, TIBET PL.	28.5N	85.5E	25.2N	83.5E	40	LO	250	N	Y	19910406	011347	246	89	12	8	
93	30	CHINA	HIMALAYAS, TIBET PL.	28.5N	86.0E	25.4N	84.1E	45	LO	250	N	Y	19910406	011358	246	89	13	8	
93	31	CHINA	HIMALAYAS, TIBET PL.	28.5N	86.5E	25.5N	84.7E	35	LO	250	N	Y	19910406	011405	246	89	13	8	
93	32	CHINA	HIMALAYAS, TIBET PL.	28.5N	90.5E	26.5N	89.8E	10	LO	250	N	N	19910406	011523	246	92	18	8	
93	33	CHINA	HIMALAYAS, TIBET PL.	28.5N	91.5E	26.8N	90.0E	25	LO	250	N	Y	19910406	011526	246	92	18	8	
93	34	CHINA	TIBET PL., SILING LK.	31.0N	90.0E	26.8N	91.5E	0	HO	250	N	N	19910406	011548	246	93	20	8	
93	35	CHINA	TIBET PL., NAM LK.	31.0N	90.5E	26.9N	91.7E	0	HO	250	N	Y	19910406	011551	246	93	20	8	
93	36	CHINA	TIBET PLATEAU	31.5N	92.0E	26.9N	91.9E	0	HO	250	N	N	19910406	011554	246	93	20	8	
93	37	CHINA	FOLDED R., CHENG HAI LAKE	27.0N	101.0E	27.2N	93.7E	65	HO	250	N	N	19910406	011622	246	94	22	8	
93	38	CHINA	YA-LUNG R.-FOLDED MNTS.	27.5N	101.5E	27.4N	95.0E	60	LO	250	N	Y	19910406	011641	246	95	23	8	
93	39	CHINA	FOLDED RANGES	27.5N	100.5E	27.4N	95.4E	30	LO	250	N	N	19910406	011646	246	95	23	8	
93	40	CHINA	FOLDED RANGES, YALANG R.	28.0N	101.0E	27.5N	96.2E	15	LO	250	N	Y	19910406	011659	246	96	24	8	
93	41	CHINA	FOLDED RANGES	27.0N	101.5E	27.9N	98.5E	45	LO	250	N	N	19910406	011733	246	97	26	8	
93	42	CHINA	FOLDED R., YANGTZE RIVER	28.0N	99.5E	27.8N	98.7E	60	LO	250	N	N	19910406	011735	246	97	27	8	
93	43	CHINA	FOLDED R., MEKONG RIVER	27.0N	98.0E	27.8N	98.9E	65	LO	250	N	Y	19910406	011738	246	97	27	8	
93	44	CHINA	FOLDED RANGES			27.9N	99.2E	75	LO	250	N	N	19910406	011743	246	97	27	8	
93	45	CHINA	FOLDED RANGES	28.0N	101.5E	27.9N	99.4E	45	LO	250	N	Y	19910406	011746	246	97	27	8	

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADIR LAT LON	CC TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL OR
93	46	CHINA	FOLDED RANGES	28.6N 102.0E	27.9N 99.7E	50	LO	250	N	Y	19910408	011750	246	98 27 8
93	47	CHINA	FOLDED RANGES	28.6N 102.0E	28.0N 100.3E	70	LO	250	N	N	19910408	011759	246	98 28 8
94	48	CHINA	FRONTAL CLOUD, DARK			50	LO	100	U	N				
94	49	CHINA	FRONTAL CLOUD, DARK			75	LO	100	U	N				
94	50	CHINA	HAZE, FOG WUYI MTS.			30	LO	100	N	N				
94	51	CHINA	HAZE, FOG WUYI MTS.			50	LO	100	N	N				
94	52	CHINA	HAZE, FOG WUYI MTS.			55	LO	100	N	N				
94	53	CHINA	COAST, SED. PLUMES			55	LO	100	N	N				
94	54	CHINA	COAST, SED. PLUMES			65	LO	100	U	N				
96	25	CHINA	TIBET PLAT., HIMALAYAS	30.0N 83.0E		30	LO	100	N	Y				
96	26	CHINA	TIBET PLAT., HIMALAYAS	29.0N 84.0E		35	LO	100	N	Y				
96	27	CHINA	TIBET PLAT., HIMALAYAS	29.0N 85.5E		25	LO	100	N	Y				
96	28	CHINA	TIBET PLAT., HIMALAYAS	30.5N 86.5E		15	LO	100	N	Y				
96	29	CHINA	TIBET PLAT., HIMALAYAS	30.0N 88.0E		25	LO	100	N	Y				
96	30	CHINA	TIBET PLAT., HIMALAYAS	30.6N 89.0E		35	LO	100	N	Y				
96	31	CHINA	TIBET PLAT., HIMALAYAS	30.0N 90.5E		55	LO	100	N	Y				
96	32	CHINA	TIBET PLAT., HIMALAYAS	29.0N 86.5E		35	HO	100	N	N				
96	34	CHINA	FOLDED RANGES, SALWEEN R	24.5N 99.0E		60	LO	100	N	N				
96	35	CHINA	FOLDED RANGES, MEKONG R.	27.5N 101.5E		50	LO	100	N	Y				
96	36	CHINA	FOLDED RANGES, MEKONG R.	27.5N 102.0E		45	LO	100	N	Y				
151	102	CHINA	MEKONG RIVER	22.0N 101.0E	22.9N 100.4E	35	LO	250	N	N	19910408	043647	245	145 70 10
151	104	CHINA	HAI-NAN TAO	19.5N 110.0E	19.8N 109.4E	70	NV	250	N	Y	19910408	043916	245	173 76 10
151	105	CHINA	LUICHOW PENINSULA	21.0N 110.0E	19.5N 110.1E	60	LO	250	N	Y	19910408	043927	245	176 76 10
152	278	CHINA	HSI-PANG MNTS., DOUBLE EX		28.3N 84.8E	25	LO	250	N	N	19910408	013537	247	92 19 39
152	279	CHINA	NIEN TANG KULA MT.-DOU EX	30.0N 87.0E	28.4N 85.7E	5	LO	250	N	N	19910408	013551	247	92 20 39
152	280	CHINA	HIMAL-CHINA, NEPAL-DOU EX		28.4N 86.5E	15	LO	250	N	N	19910408	013602	247	93 20 39
152	281	CHINA	MU HSIN-LIN LAKE-TIBET P	28.5N 88.5E	28.5N 88.1E	50	NV	250	N	N	19910408	013625	248	94 22 39
152	282	CHINA	LAKE NAMU-TIB PLAT-DOUEX	30.0N 90.5E	28.5N 89.4E	80	LO	250	N	N	19910408	013645	248	94 23 39
152	284	CHINA	TA-YEN, CHENG L.-DOUB EXP	27.0N 100.0E	28.4N 97.5E	60	LO	250	N	N	19910408	013842	248	99 30 39
152	285	CHINA	JINSHA R.-LONGJIE	26.5N 102.0E	28.1N 102.0E	5	LO	250	N	Y	19910408	013949	248	101 35 39
152	286	CHINA	JINSHA R.-LU-NAN MNTS.	27.0N 102.5E	27.9N 104.1E	5	LO	250	N	Y	19910408	014020	248	103 37 39
152	287	CHINA	FOLDED MOUNTAINS-CLOUDS		27.6N 106.4E	80	LO	250	N	N	19910408	014053	248	104 39 39
152	288	CHINA	MNTS. NEAR COAST-CLOUDS		26.0N 115.9E	85	LO	250	N	N	19910408	014317	248	110 48 39
153	161	CHINA	TIBET PLAT., NA-MU LAKE	31.0N 92.0E	27.5N 79.8E	60	HO	250	O	N	19910410	001643	245	80 -1 69
153	162	CHINA	TIBET PLAT., NA-MU LAKE	29.5N 90.0E	28.0N 83.8E	55	LO	250	N	N	19910410	001742	246	82 1 69
153	163	CHINA	HIMALAYAS, PAIKU-CO LK.	28.5N 85.5E	28.2N 86.2E	5	NV	250	N	N	19910410	001817	246	83 4 69
153	164	CHINA	HIMALAYAS, IIXABANGMA	28.5N 85.5E	28.3N 87.3E	5	NV	250	N	Y	19910410	001834	246	84 5 69
153	165	CHINA	HIMALAYAS	28.5N 86.5E	28.3N 88.6E	5	NV	250	N	Y	19910410	001852	246	84 6 69
153	166	CHINA	HIMALAYAS	28.5N 89.0E	28.4N 89.7E	5	NV	250	N	Y	19910410	001908	246	85 7 69
153	167	CHINA	HIMALAYAS, PUMA LK.	29.0N 90.0E	28.4N 90.8E	10	NV	250	N	Y	19910410	001924	246	85 8 69

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		NADIR		CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM
				LAT	LONG	LAT	LONG										EL OR
153	168	CHINA	HIMALAYAS, PUMA LK.	28.5N	91.0E	28.5N	91.7E	25	NV	250	N	Y	19910410	001938	246	86	9 89
153	169	CHINA	HIMALAYAS, BRAHMAPUTRA	29.5N	90.5E			10	LO	250	N	N					
153	170	CHINA	HIMALAYAS, BRAHMAPUTRA	29.0N	92.0E	28.5N	93.4E	5	LO	250	N	Y	19910410	002003	246	87	10 69
153	171	CHINA	TIBET PLAT., DLB. EXPOS.					50	HO	250	O	N					
153	172	CHINA	TIBET PLATEAU	34.5N	91.0E	28.5N	98.3E	80	HO	250	N	N	19910410	002113	247	89	15 69
153	173	CHINA	TIBET PLAT., DBL. EXPOS			28.4N	100.6E	60	HO	250	O	N	19910410	002147	247	90	17 69
153	174	CHINA	TIBET PLATEAU			28.4N	101.3E	70	HO	250	N	N	19910410	002158	247	90	18 69
153	175	CHINA	TIBET P., YAMZHO LAKE	30.0N	89.5E	28.3N	103.1E	40	HO	250	N	N	19910410	002224	247	91	19 69
153	176	CHINA	TIBET P., YAMZHO LAKE	29.0N	88.5E	28.2N	103.9E	40	HO	250	N	Y	19910410	002235	247	92	20 69
153	177	CHINA	FOLDED R., DBL. EXPOSURE					55	HO	250	O	N					
153	178	CHINA	FOLDED RANGES	29.5N	99.0E	28.0N	106.6E	50	HO	250	N	N	19910410	002315	247	93	23 69
153	179	CHINA	FOLDED R., DBL. EXPOSURE			18.7N	143.6E	55	HO	250	O	N	19910410	003256	248	107	60 69
71	72	COLOMBIA	PEN. DELA GUAJIRA	12.5N	71.5W	14.2N	70.8W	80	LO	250	N	N	19910405	174852	244	244	72 3
72	50	COLOMBIA	CIRRUS, CUMULUS CLOUDS			1.7N	71.8W	90	LO	100	N	N	19910405	192924	243	277	50 4
79	77	COLOMBIA	SIMU RIVER MOUTH	9.0N	76.0W	6.3N	77.9W	65	LO	250	N	N	19910406	184827	243	271	66 19
79	78	COLOMBIA	SIMU RIVER MOUTH	9.0N	76.0W	5.6N	76.5W	65	LO	250	U	N	19910406	184853	243	273	65 19
79	79	COLOMBIA	SAN JUAN R. DELTA	4.0N	77.0W	4.4N	74.5W	70	LO	250	N	N	19910406	184931	243	275	62 19
81	27	COLOMBIA	CLOUDS, LAND USE			3.8N	75.4W	70	LO	250	N	N	19910405	192816	243	275	54 4
89	66	COLOMBIA	CLOUD FRONT, DARK			6.5N	74.4W	80	LO	250	U	N	19910408	173146	246	274	82 49
91	38	COLOMBIA	COAST, CLOUDS			4.9N	77.3W	80	LO	250	N	Y	19910405	192739	243	273	56 4
91	39	COLOMBIA	COAST, CLOUDS			4.3N	76.3W	80	LO	250	N	Y	19910405	192759	243	274	55 4
91	40	COLOMBIA	COLIMA RES, ANDES,CLDS	4.0N	76.5W	3.8N	75.4W	85	LO	250	N	N	19910405	192815	243	275	54 4
91	41	COLOMBIA	RIO ARIARI, RIO AGUAPE	4.0N	74.0W	3.2N	74.3W	80	NV	250	N	N	19910405	192836	243	275	52 4
91	42	COLOMBIA	RIO ARIARI, LLANOS	3.0N	73.0W	3.1N	74.1W	40	LO	250	N	N	19910405	192840	243	276	52 4
92	9	COLOMBIA	RIO ATRATO AREA	7.5N	77.0W	6.7N	78.5W	80	LO	250	N	N	19910406	184815	244	270	67 19
92	10	COLOMBIA	RIO ATRATO AREA			6.6N	78.3W	90	LO	250	N	N	19910406	184819	244	271	66 19
92	11	COLOMBIA	RIO ATRATO AREA	7.5N	77.0W	6.0N	77.3W	90	LO	250	N	N	19910406	184837	243	272	65 19
92	12	COLOMBIA	RIO ATRATO AREA			5.9N	77.1W	95	LO	250	N	N	19910406	184841	243	272	65 19
92	13	COLOMBIA	BAHIA DE CUPICA AREA			5.8N	76.9W	95	LO	250	N	N	19910406	184845	243	272	65 19
92	14	COLOMBIA	BAHIA SOLANO	6.3N	77.5W	5.3N	76.0W	60	LO	250	N	N	19910406	184902	243	273	64 19
92	15	COLOMBIA	MAGDALENA RIVER VALLEY	5.7N	74.7W	4.9N	75.4W	50	LO	250	N	N	19910406	184914	243	274	63 19
151	28	COLOMBIA	MEDELLIN	6.5N	76.0W	4.9N	77.3W	80	LO	250	N	N	19910405	192739	243	273	56 4
151	29	COLOMBIA	BOGOTA	4.5N	74.5W	4.2N	76.1W	80	LO	250	N	Y	19910405	192803	243	274	54 4
151	30	COLOMBIA	CORDILLERA ORIENTAL	3.5N	74.0W	3.9N	75.6W	55	LO	250	N	Y	19910405	192813	243	274	54 4
151	31	COLOMBIA	CORDILLERA ORIENTAL	4.0N	73.5W	3.5N	74.9W	50	LO	250	N	Y	19910405	192826	243	275	53 4
151	32	COLOMBIA	SERRANIA DE LA MACARENA	3.0N	74.0W	3.4N	74.6W	55	NV	250	N	Y	19910405	192832	243	275	53 4
151	33	COLOMBIA	RIO GUAYABERO	2.5N	73.5W	2.4N	72.9W	55	NV	250	N	Y	19910405	192903	243	276	51 4
151	34	COLOMBIA	RIO CAQUETA	0.0	72.0W	0.9N	70.3W	80	LO	250	N	Y	19910405	192953	243	278	48 4
151	35	COLOMBIA	RIO CAQUETA, RIO APAPORI	1.0S	70.5W	0.4N	69.5W	90	LO	250	N	Y	19910405	193008	243	278	47 4
80	53	CONGO	NEAR THE NIARI RIVER			0.8S	11.8E	75	LO	250	O	N	19910409	121652	246	298	72 61

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		MADIR		CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN	EL	OR
				LAT	LONG	LAT	LONG												
80	54	CONGO	NIARI RIVER	3.5S	12.5E	0.9S	11.9E	65	LO	250	N	N	19910409	121654	246	298	72	61	
80	55	CONGO	NEAR THE NIARI RIVER			1.0S	12.1E	75	LO	250	O	N	19910409	121658	246	298	72	61	
80	59	CONGO	INLAND FROM MBIA LAGOON			1.5S	12.9E	75	NV	250	O	N	19910409	121714	246	298	71	61	
80	60	CONGO	LAND USE PATTERNS			1.6S	13.1E	80	NV	250	O	N	19910409	121718	246	298	70	61	
80	61	CONGO	LAND USE PATTERNS			1.8S	13.4E	80	LO	250	O	N	19910409	121723	246	298	70	61	
80	62	CONGO	COAST S. OF MBIA LAGOON	4.0S	11.0E	1.9S	13.7E	60	LO	250	N	N	19910409	121728	246	298	70	61	
80	67	CONGO	LEFINI RIVER	3.0S	15.5E	2.9S	15.4E	65	NV	250	N	N	19910409	121802	246	298	67	61	
87	9	CONGO	COAST	4.0S	11.3E	1.0S	12.1E	50	LO	250	U	Y	19910409	121657	246	298	72	61	
87	14	CONGO	CLOUDS, HILLS			2.1S	13.9E	90	LO	250	U	Y	19910409	121733	246	298	69	61	
87	15	CONGO	COAST, POINTE-NOIRE	4.7S	12.0E	2.2S	14.1E	60	LO	250	U	Y	19910409	121736	246	298	69	61	
87	17	CONGO	CONGO RIVER	2.7S	16.1E	2.8S	15.1E	80	LO	250	N	Y	19910409	121756	246	298	68	61	
87	18	CONGO	CONGO RIVER, KWA RIVER	3.2S	16.1E	2.9S	15.3E	80	LO	250	N	Y	19910409	121800	246	298	68	61	
87	19	CONGO	CONGO RIVER	3.5S	16.0E	3.0S	15.5E	80	LO	250	N	Y	19910409	121803	246	298	67	61	
87	21	CONGO	KINSHASA, BRAZZAVILLE	4.4S	15.1E	3.2S	15.9E	85	LO	250	N	Y	19910409	121811	246	298	67	61	
87	22	CONGO	CONGO RIVER	4.7S	14.7E	3.3S	16.1E	85	LO	250	U	Y	19910409	121814	246	298	67	61	
90	66	CONGO	VERY DARK			4.4S	12.2E	75	LO	250	U	N	19910406	141400	242	283	43	16	
152	154	CORAL SEA	LIHOU REEFS	17.0S	152.0E	15.0S	153.4E	75	LO	250	N	N	19910407	055432	243	285	25	26	
152	155	CORAL SEA	CLOUDS			16.7S	157.3E	80	LO	250	N	N	19910407	055539	243	284	21	26	
79	70	COSTA RICA	GULF OF NICOYA	10.0N	85.0W	11.9N	88.2W	30	LO	250	N	N	19910406	184515	244	246	76	19	
81	18	COSTA RICA	GULF OF PAPAGAYO	10.5N	85.5W	9.9N	86.2W	0	LO	250	N	Y	19910405	192453	243	262	65	4	
81	19	COSTA RICA	NICOYA PENINSULA	10.0N	85.5W	9.8N	86.1W	0	LO	250	N	Y	19910405	192455	243	263	65	4	
81	20	COSTA RICA	GULF OF NICOYA	10.0N	85.0W	9.8N	86.0W	5	LO	250	N	Y	19910405	192456	243	263	65	4	
81	21	COSTA RICA	NEAR SAN JOSE	10.0N	84.0W	9.3N	85.2W	70	LO	250	N	N	19910405	192511	243	264	64	4	
81	24	COSTA RICA	OSA PEN., GULF OF DULCE	9.0N	83.5W	8.4N	83.5W	40	NV	250	N	N	19910405	192542	243	266	62	4	
85	14	COSTA RICA	CORDILLERA DE GUANACASTE	10.8N	85.3W	11.3N	83.2W	20	LO	250	N	N	19910408	172902	246	161	85	49	
89	61	COSTA RICA	L. NICARAGUA, MT. OROSI	11.0N	85.5W	12.2N	85.0W	25	LO	250	N	N	19910408	172829	246	144	83	49	
91	26	COSTA RICA	PAPAGAYO GULF, COAST	10.5N	86.0W	9.9N	86.3W	0	LO	250	N	N	19910405	192450	243	262	65	4	
91	27	COSTA RICA	NICOYA PENINSULA	10.0N	85.5W	9.9N	86.2W	5	LO	250	N	Y	19910405	192452	243	263	65	4	
91	28	COSTA RICA	NICOYA PENINSULA/GULF	10.0N	85.0W	9.8N	86.1W	5	LO	250	N	Y	19910405	192454	243	263	65	4	
91	29	COSTA RICA	SAN JOSE, CLOUDS	10.0N	84.0W	9.4N	85.3W	60	LO	250	N	N	19910405	192509	243	264	64	4	
91	31	COSTA RICA	PT. BURICA, PENINSULA	8.5N	83.0W	8.6N	83.8W	30	NV	250	N	N	19910405	192537	243	266	63	4	
91	32	COSTA RICA	CST, PT UVITA	9.0N	84.0W	8.5N	83.6W	40	LO	250	N	N	19910405	192540	243	266	62	4	
91	35	COSTA RICA	PT. BURICA, PENINSULA	8.0N	83.0W	7.0N	81.0W	30	LO	250	N	N	19910405	192630	243	270	60	4	
92	4	COSTA RICA	GOLFO DE NICOYA	10.0N	85.4W	10.6N	85.6W	40	LO	250	N	N	19910406	184602	244	255	74	19	
92	5	COSTA RICA	RIO TEMPISQUE AREA	10.3N	85.6W	10.5N	85.5W	40	LO	250	N	N	19910406	184605	244	256	74	19	
92	6	COSTA RICA	WATER DETAIL, GULF PAPAGA	10.9N	85.7W	10.4N	85.3W	40	LO	250	N	N	19910406	184608	244	256	74	19	
96	52	COSTA RICA	L. NICARAGUA, NICOYA PEN	11.0N	85.5W			55	LO	100	N	Y							
151	18	COSTA RICA	PACIFIC COAST	10.0N	86.0W	10.6N	87.5W	15	LO	250	N	Y	19910405	182428	243	260	66	4	
151	19	COSTA RICA	GULF OF NICOYA	10.5N	85.0W	10.4N	87.2W	25	LO	250	N	Y	19910405	192434	243	261	66	4	
151	20	COSTA RICA	LAGO DE NICARAGUA	11.0N	85.0W	10.1N	86.7W	35	LO	250	N	Y	19910405	192444	243	262	66	4	



TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	NADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL	OR
151	22	COSTA RICA	SUNGLINT-GULF OF NICOYA	9.0N 84.5W	8.8N 84.2W	35	NV	250	N	Y	19910405	192530	243	265	63	4
151	23	COSTA RICA	PENINSULA DE OSA	8.5N 83.5W	8.7N 84.0W	35	NV	250	N	Y	19910405	192534	243	266	63	4
151	24	COSTA RICA	PUNTA BURICA	8.5N 83.0W	8.5N 83.8W	25	NV	250	N	Y	19910405	192540	243	266	63	4
16	25	CUBA	ISLE OF PINES, W. CUBA	22.0N 83.0W	15.2N 87.0W	55	HO	35	O	N	19910410	161002	247	104	65	79
16	27	CUBA	OVEREXPOSED	22.0N 80.0W	13.8N 84.1W	40	HO	35	O	N	19910410	161055	247	103	68	79
16	28	CUBA	JAMAICA, CAYMAN ISLANDS	20.0N 78.0W	11.5N 79.7W	35	HO	35	N	Y	19910410	161215	247	100	73	79
72	10	CUBA	GULF OF BATABANO	22.0N 82.5W	19.8N 83.5W	45	LO	100	N	Y	19910405	174511	244	187	76	3
72	11	CUBA	CORTES BAY	22.0N 84.0W	19.6N 83.0W	60	LO	100	N	Y	19910405	174520	244	190	76	3
72	12	CUBA	PEN. DE ZAPATA	22.5N 81.5W	19.4N 82.7W	60	LO	100	N	Y	19910405	174525	244	191	76	3
72	14	CUBA	MIDDLE-SOUTHERN PART	21.5N 79.5W	18.8N 80.9W	45	LO	100	N	Y	19910405	174554	244	199	76	3
72	15	CUBA	MIDDLE-NORTHERN PART	22.5N 79.0W	18.4N 80.1W	50	LO	100	N	Y	19910405	174608	244	203	76	3
72	19	CUBA	EASTERN END	20.5N 76.5W	16.1N 74.8W	45	LO	100	N	Y	19910405	174741	244	228	75	3
74	29	CUBA	EASTERN CUBA	20.5N 75.5W	4.7N 18.6W	60	LO	250	N	N	19910409	133349	245	102	40	62
74	30	CUBA	EASTERN CUBA	20.5N 76.5W	4.8N 18.7W	70	LO	250	N	N	19910409	133352	245	102	40	62
78	29	CUBA	ZAPATA PEN., BAY OF PIGS	22.5N 81.5W	5.0N 43.4W	25	LO	250	N	N	19910409	151041	245	109	56	63
78	30	CUBA	RIO CAONAO RESERVOIR	21.5N 78.0W	5.2N 43.6W	15	LO	250	N	N	19910409	151054	245	109	57	63
78	31	CUBA	GULF OF GUACANAYABO	20.5N 77.0W	5.5N 44.4W	35	LO	250	N	N	19910409	151126	245	109	59	63
78	32	CUBA	GULF OF GUACANAYABO	20.0N 77.5W	5.5N 44.5W	15	LO	250	N	Y	19910409	151129	245	109	59	63
78	33	CUBA	SIERRA MAESTRA	20.0N 76.5W	5.5N 44.6W	20	LO	250	N	N	19910409	151133	245	110	60	63
78	34	CUBA	GUANTANAMO BAY	20.0N 75.0W	5.8N 45.4W	25	LO	250	N	N	19910409	151158	245	110	61	63
78	35	CUBA	PTS. DEL FRAILE, CALETA	20.5N 74.5W	5.9N 45.4W	30	LO	250	N	S	19910409	151200	245	110	61	63
78	36	CUBA	POINT CABANAS	20.5N 75.0W	5.9N 45.5W	30	LO	250	N	S	19910409	151203	245	110	62	63
78	37	CUBA	NIPE BAY, PT. GARCIA	21.0N 75.5W	5.9N 45.6W	25	LO	250	N	Y	19910409	151205	245	110	62	63
83	67	CUBA	WEST AREA, ISLE OF PINES	22.0N 82.0W	4.9N 42.9W	30	LO	100	N	N	19910409	151016	245	108	55	63
83	68	CUBA	CENTRAL SECTION	21.8N 79.0W	5.2N 43.9W	30	LO	100	N	Y	19910409	151103	245	109	58	63
83	69	CUBA	CENTRAL SECTION	21.8N 78.6W	5.3N 44.1W	30	LO	100	N	Y	19910409	151113	245	109	59	63
83	70	CUBA	CENTRAL-EAST SECTION	20.7N 76.1W	5.6N 44.8W	30	LO	100	N	Y	19910409	151139	245	110	60	63
83	71	CUBA	EAST END	20.7N 75.0W	5.7N 45.1W	30	LO	100	N	Y	19910409	151149	245	110	61	63
153	30	CUBA	BAY OF PIGS, HAVANA	23.0N 82.5W	4.9N 42.8W	60	LO	250	N	N	19910409	151006	245	108	54	63
153	31	CUBA	BAY OF PIGS, ISLE OF PINE	22.5N 82.5W		45	LO	250	N	Y						
153	32	CUBA	CANNARREOS ARCHIPELAGO	22.5N 80.5W	4.9N 43.0W	35	LO	250	N	Y	19910409	151023	245	108	56	63
153	33	CUBA	CITY OF CIENFUEGOS	22.5N 81.0W		50	LO	250	N	Y						
152	255	CYPRUS	MEDITERRANEAN-NILE DELTA		23.3N 29.3E	20	HO	250	N	Y	19910407	083816	246	124	63	28
14	29	DJIBOUTI	AFAR REGION, ERTA ALE	12.0N 43.0E	12.9N 37.0E	15	HO	35	N	N	19910410	082402	247	105	72	74
14	32	DJIBOUTI	AFAR REGION, L. ASSAL	12.0N 43.0E	11.0N 40.7E	15	LO	35	N	N	19910410	082511	247	102	76	74
88	34	DJIBOUTI	TADJOURA GULF, L. ASSAL	11.8N 43.0E	10.2N 40.2E	10	LO	250	N	N	19910409	090356	246	122	84	59
88	38	DJIBOUTI	GULF TADJOURA, L. ASSAL	11.5N 43.0E	7.5N 45.2E	40	LO	250	N	N	19910409	090529	246	266	88	59
94	98	DJIBOUTI	AFAR REGION, LAKE ABBE	11.0N 42.0E		15	HO	100	N	Y						
98	64	DJIBOUTI	LAKE ABBE	11.5N 42.2E	8.0N 40.5E	10	LO	250	N	N	19910407	102154	244	266	74	29
98	65	DJIBOUTI	LAKE ABBE	11.5N 42.2E	7.9N 40.7E	10	LO	250	N	N	19910407	102157	244	266	74	29

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LAT	NADIR LAT LAT	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL	OR
98	66	DJIBOUTI	GULF OF ADEN	11.7N 43.5E	7.8N 40.8E	10	LO	250	N	N	19910407	102200	244	267	74	29
72	20	DOMINICAN REPUBLIC	LAKE ENRIQUILLO	18.5N 71.5W	15.3N 73.1W	40	LO	100	N	Y	19910405	174810	244	235	74	3
72	21	DOMINICAN REPUBLIC	COAST-CARIBBEAN SEA	18.0N 70.5W	15.1N 72.7W	40	LO	100	N	Y	19910405	174817	244	236	73	3
74	36	DOMINICAN REPUBLIC	SW. CENTRAL	19.0N 71.0W	5.0N 19.3W	40	LO	250	N	N	19910409	133413	245	103	42	62
74	37	DOMINICAN REPUBLIC	CENTRAL	18.9N 70.3W	5.0N 19.5W	80	LO	250	N	N	19910409	133418	245	103	42	62
74	38	DOMINICAN REPUBLIC	EASTERN TIP	18.8N 69.8W	5.1N 19.6W	90	LO	250	N	N	19910409	133421	245	103	42	62
75	46	DOMINICAN REPUBLIC	HISPANIOLA, VRY HI OBLIQ	27.5N 64.1W	27.5N 64.1W	80	HO	250	N	N	19910406	135158	246	114	49	16
75	47	DOMINICAN REPUBLIC	HISPANIOLA, VRY HI OBLIQ	27.4N 63.3W	27.4N 63.3W	80	HO	250	N	N	19910406	135210	246	114	50	16
76	19	DOMINICAN REPUBLIC	SIERRA DE BAORUCO	18.0N 71.5W	6.9N 47.9W	20	LO	250	N	N	19910409	151317	244	111	66	63
76	20	DOMINICAN REPUBLIC	RIFT AREA, BARAHONA	18.2N 71.2W	7.0N 48.0W	10	LO	250	N	N	19910409	151320	244	111	66	63
76	21	DOMINICAN REPUBLIC	RIFT AREA, BARAHONA	18.2N 70.8W	7.0N 48.0W	10	LO	250	N	N	19910409	151322	244	111	67	63
76	22	DOMINICAN REPUBLIC	CORDILLERA CENTRAL	18.8N 71.2W	7.0N 48.1W	20	LO	250	N	N	19910409	151325	244	111	67	63
76	23	DOMINICAN REPUBLIC	RIFT VALLEY	18.8N 71.7W	7.1N 48.2W	20	LO	250	N	N	19910409	151328	244	111	67	63
76	28	DOMINICAN REPUBLIC	NORTHWEST AREA	19.4N 71.5W	7.3N 48.8W	30	LO	250	N	N	19910409	151346	244	112	68	63
76	29	DOMINICAN REPUBLIC	CENTRAL AREA	19.0N 70.7W	7.4N 48.8W	60	LO	250	N	N	19910409	151348	244	112	68	63
76	30	DOMINICAN REPUBLIC	EASTERN TIP	18.6N 69.0W	7.6N 49.4W	60	LO	250	N	N	19910409	151406	244	112	69	63
76	31	DOMINICAN REPUBLIC	EASTERN TIP	18.6N 69.4W	7.7N 49.5W	60	LO	250	N	N	19910409	151411	244	112	70	63
76	32	DOMINICAN REPUBLIC	EASTERN TIP	18.6N 69.8W	7.8N 49.7W	70	LO	250	N	N	19910409	151418	244	112	70	63
76	33	DOMINICAN REPUBLIC	EASTERN TIP	18.8N 69.8W	7.8N 49.9W	70	LO	250	N	N	19910409	151424	244	112	71	63
76	34	DOMINICAN REPUBLIC	EASTERN TIP	18.0N 68.0W	7.9N 50.1W	60	LO	250	N	N	19910409	151431	244	112	71	63
78	43	DOMINICAN REPUBLIC	CENTRAL RANGE	19.5N 71.5W	6.5N 46.9W	30	LO	250	N	Y	19910409	151246	244	111	64	63
78	44	DOMINICAN REPUBLIC	CENTRAL RANGE	19.0N 71.0W	6.5N 47.0W	20	NV	250	N	Y	19910409	151249	244	111	65	63
78	45	DOMINICAN REPUBLIC	LAKE ENRIQUILLO	18.5N 71.5W	6.6N 47.0W	15	NV	250	N	Y	19910409	151251	244	111	65	63
78	46	DOMINICAN REPUBLIC	NEIBA, OCOA BAYS	18.5N 71.0W	6.6N 47.2W	5	NV	250	N	Y	19910409	151255	244	111	65	63
78	47	DOMINICAN REPUBLIC	NEIBA, OCOA BAYS	18.0N 71.0W	6.7N 47.4W	5	NV	250	N	Y	19910409	151302	244	111	65	63
78	48	DOMINICAN REPUBLIC	SAONA IS., YUMA BAY	18.5N 68.5W	7.1N 48.2W	35	LO	250	N	N	19910409	151328	244	112	67	63
83	72	DOMINICAN REPUBLIC	SW SECTION, ENRIQUILLO L.	18.5N 70.6W	6.9N 47.7W	35	LO	100	N	N	19910409	151312	244	111	66	63
83	73	DOMINICAN REPUBLIC	EAST SECTION	18.5N 69.5W	6.9N 47.8W	50	LO	100	N	N	19910409	151316	244	111	66	63
87	71	DOMINICAN REPUBLIC	CORD. CENTRAL, NORTH SIDE	19.2N 71.3W	4.7N 18.5W	40	LO	250	U	Y	19910409	133347	245	104	43	62
87	72	DOMINICAN REPUBLIC	CORD. CENTRAL, NORTH SIDE	19.3N 71.0W	4.7N 18.6W	60	LO	250	U	N	19910409	133350	245	104	43	62
87	73	DOMINICAN REPUBLIC	SANTO DOMINGO, SOUTH SIDE	18.7N 69.8W	4.8N 18.7W	70	LO	250	U	N	19910409	133354	245	104	44	62
87	74	DOMINICAN REPUBLIC	EAST END	19.0N 69.0W	4.8N 18.9W	75	LO	250	U	N	19910409	133359	245	104	44	62
44	13	ECUADOR	RIO NAPO, RIO COCA, ANDES	1.0S 77.0W	2.3S 79.4W	75	LO	70	N	N	19910410	175322	248	320	77	80
76	86	ECUADOR	COAST, S OF MANTA	2.2S 80.4W	1.3S 82.8W	90	LO	250	N	N	19910409	183046	245	301	73	65
76	87	ECUADOR	NEAR MANTA	2.2S 80.4W	1.4S 82.6W	95	LO	250	N	N	19910409	183050	245	301	73	65
76	88	ECUADOR	NEAR MANTA, COAST	2.2S 80.4W	2.5S 80.9W	70	LO	250	N	N	19910409	183123	245	301	70	65
76	90	ECUADOR	PUNTA SANTA ELENA AREA	2.2S 80.4W	2.6S 80.7W	70	LO	250	N	N	19910409	183127	245	301	70	65
8	18	EGYPT	PANORAMA, MILE VALLEY	28.0N 32.0E	25.3N 28.0E	10	HO	35	N	N	19910410	064122	245	100	38	73
8	19	EGYPT	PANORAMA, MILE VALLEY	25.0N 34.0E	25.2N 28.5E	5	HO	35	N	N	19910410	064130	246	100	38	73
8	20	EGYPT	PANORAMA, ARABIAN DESERT	23.0N 36.0E	25.1N 28.7E	5	HO	35	N	N	19910410	064133	246	100	38	73

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
8	21	EGYPT	GILF KEBIR PLATEAU, NILE	24.0N 30.0E	24.9N 29.6E	0	L0	35	N	N	19910410	084148	246	101	39	73
8	22	EGYPT	GILF KEBIR PLATEAU	23.0N 26.0E	24.8N 30.0E	0	L0	35	N	N	19910410	084153	246	101	39	73
8	24	EGYPT	NILE, ASWAN DAM AREA	25.5N 30.0E	24.3N 31.9E	0	L0	35	N	N	19910410	084224	246	101	41	73
8	25	EGYPT	NILE, N. ASWAN DAM AREA	25.5N 33.0E	24.2N 32.5E	0	L0	35	N	N	19910410	084233	246	102	42	73
8	27	EGYPT	S. ARABIAN DESERT	23.0N 34.0E	23.7N 34.2E	5	L0	35	N	N	19910410	084300	246	102	44	73
14	11	EGYPT	GILF KEBIR PLATEAU	22.0N 25.0E	21.0N 18.6E	15	H0	35	N	N	19910410	081842	246	104	52	74
38	1	EGYPT	SINAI PEN., JET STREAM	29.0N 31.0E		25	H0	35	N	N						
38	2	EGYPT	GREAT SAND SEA	27.0N 29.0E	28.6N 26.8E	10	L0	35	N	N	19910411	042325	243	84	6	87
38	3	EGYPT	GULF OF SUEZ, NILE RIVER	29.0N 33.0E	28.5N 29.5E	20	L0	35	N	N	19910411	042404	243	85	8	87
38	4	EGYPT	AL-FAYYUM AG. AREA	28.0N 31.0E	28.5N 30.6E	5	L0	35	N	N	19910411	042421	243	86	9	87
38	5	EGYPT	SUEZ CANAL	30.0N 32.0E	28.5N 30.9E	25	L0	35	N	N	19910411	042424	243	86	10	87
38	33	EGYPT	NILE RIVER VALLEY	28.0N 31.0E	25.5N 29.0E	15	H0	35	N	N	19910411	080322	245	95	30	88
38	34	EGYPT	NILE R., ARABIAN DESERT	27.0N 32.0E	25.3N 29.6E	20	L0	35	N	N	19910411	080331	245	96	31	88
38	35	EGYPT	NILE RIVER, SINAI PEN.	28.0N 33.0E	25.1N 30.6E	20	H0	35	N	N	19910411	080346	245	96	32	88
38	36	EGYPT	NILE R., VALLEY OF KINGS	25.0N 33.0E	24.9N 31.4E	25	L0	35	N	N	19910411	080359	245	96	32	88
38	38	EGYPT	NILE RIVER VALLEY	26.0N 32.0E	23.2N 37.4E	0	L0	35	N	N	19910411	080534	246	98	39	88
73	97	EGYPT	SINAI, RED SEA, GU.AQABA	29.5N 34.6E	23.1N 30.0E	0	H0	250	N	N	19910407	083828	246	125	63	28
73	98	EGYPT	SINAI, RED SEA, GU.AQABA	28.5N 34.8E	22.9N 30.8E	0	H0	250	N	N	19910407	083840	246	126	64	28
73	99	EGYPT	NILE RIVER	26.0N 32.0E	22.5N 31.9E	0	L0	250	N	N	19910407	083858	246	127	65	28
73	100	EGYPT	NILE RIVER	26.0N 32.8E	22.0N 33.4E	0	L0	250	N	N	19910407	083923	246	129	67	28
82	42	EGYPT	HIGHLANDS, LIBYAN DESERT		24.0N 25.0E	0	L0	250	N	Y	19910406	091606	246	135	66	13
82	43	EGYPT	HIGHLANDS, LIBYAN DESERT		24.0N 25.2E	0	L0	250	N	Y	19910406	091609	246	136	66	13
82	44	EGYPT	HIGHLANDS, LIBYAN DESERT		23.9N 25.4E	0	L0	250	N	Y	19910406	091612	246	135	66	13
82	45	EGYPT	HIGHLANDS, LIBYAN DESERT		23.9N 25.6E	0	L0	250	N	Y	19910406	091615	246	136	66	13
82	46	EGYPT	HIGHLANDS, LIBYA DESERT		23.8N 26.8E	0	L0	250	N	Y	19910406	091619	246	136	66	13
82	47	EGYPT	GILF KEBIR PLAT, DESERT	24.0N 26.0E	23.7N 26.0E	0	L0	250	N	Y	19910406	091622	246	136	67	13
82	48	EGYPT	GILF KEBIR PLAT, DESERT	23.7N 26.0E	23.7N 26.2E	0	L0	250	N	Y	19910406	091625	246	137	67	13
82	49	EGYPT	GILF KEBIR PLAT, DESERT	24.0N 27.0E	23.6N 26.5E	0	L0	250	N	Y	19910406	091630	246	137	67	13
82	50	EGYPT	LIBYAN SAND SEA		23.5N 26.8E	0	L0	250	N	Y	19910406	091635	246	138	67	13
82	51	EGYPT	LIBYAN SAND SEA		23.3N 27.4E	0	L0	250	N	Y	19910406	091644	246	139	68	13
82	52	EGYPT	LIBYAN SAND SEA		23.3N 27.6E	0	L0	250	N	Y	19910406	091647	246	139	68	13
82	53	EGYPT	LIBYAN SAND SEA		23.2N 27.8E	0	L0	250	N	Y	19910406	091650	246	139	68	13
82	54	EGYPT	LIBYAN SAND SEA		23.1N 28.0E	0	L0	250	N	N	19910406	091654	246	140	68	13
82	55	EGYPT	WESTERN DESERT		23.0N 28.6E	0	L0	250	N	N	19910406	091703	246	141	69	13
82	56	EGYPT	WESTERN DESERT		22.9N 28.9E	0	L0	250	N	N	19910406	091709	246	142	69	13
82	57	EGYPT	WESTERN DESERT		22.8N 29.1E	0	L0	250	N	N	19910406	091712	246	142	69	13
82	58	EGYPT	WESTERN DESERT		22.7N 29.5E	0	L0	250	N	N	19910406	091718	246	143	70	13
82	59	EGYPT	WESTERN DESERT		22.6N 29.8E	0	L0	250	N	N	19910406	091723	246	143	70	13
82	60	EGYPT	WESTERN DESERT		22.5N 30.0E	0	L0	250	N	N	19910406	091726	246	144	70	13
82	63	EGYPT	NILE RIVER, DESERT	22.1N 31.5E	22.2N 31.0E	NV	250	N	Y	19910406	091743	245	146	71	13	

TABLE 4.4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	LONG	MADIR LAT	LONG	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL	OR
82	64	EGYPT	NILE RIVER, MASSER RES.	22.3N	31.7E	22.1N	31.2E	0	NV	250	N	Y	19910406	091746	245	146	71	13
82	65	EGYPT	NILE RIVER, MASSER RES.	22.5N	31.9E	22.1N	31.3E	0	NV	250	N	Y	19910406	091748	245	147	71	13
82	66	EGYPT	NILE RIVER, MASSER RES.	22.6N	32.1E	22.0N	31.5E	0	LO	250	N	Y	19910406	091750	245	147	71	13
82	67	EGYPT	NILE RIVER, MASSER RES.	22.7N	32.4E	22.0N	31.6E	0	LO	250	N	Y	19910406	091752	245	147	71	13
82	68	EGYPT	NILE RIVER, LAKE MASSER	22.9N	32.7E	21.9N	31.8E	10	LO	250	N	Y	19910406	091755	245	148	71	13
82	69	EGYPT	NILE RIVER, LAKE MASSER	23.1N	33.0E	21.9N	32.0E	10	LO	250	N	Y	19910406	091759	245	148	72	13
82	70	EGYPT	NUBIAN DES, WADI ALLAQI	22.6N	33.4E	21.8N	32.3E	20	LO	250	N	Y	19910406	091804	245	149	72	13
82	71	EGYPT	NUBIAN DES, WADI ALLAQI	22.2N	34.4E	21.7N	32.6E	20	LO	250	N	Y	19910406	091809	245	150	72	13
82	72	EGYPT	NUBIAN DES, WADI ALLAQI	21.5N	34.6E	21.5N	33.1E	20	LO	250	N	Y	19910406	091817	245	151	72	13
82	73	EGYPT	NUBIAN DES, WADI ALLAQI	22.1N	34.5E	21.4N	33.2E	10	LO	250	N	Y	19910406	091819	245	152	73	13
82	74	EGYPT	WADI ALLAQI, NUBIAN DES.	22.1N	35.0E	21.4N	33.4E	5	LO	250	N	Y	19910406	091821	245	152	73	13
82	75	EGYPT	MT. IS, WADI ALLAQI, DESERT	21.6N	35.3E	21.3N	33.5E	5	LO	250	N	Y	19910406	091824	245	152	73	13
82	76	EGYPT	MT. JARF, NUBIAN DESERT	22.8N	34.9E	21.3N	33.8E	10	LO	250	N	Y	19910406	091828	245	153	73	13
82	77	EGYPT	MT. JARF, RED SEA COAST	22.6N	35.3E	21.2N	34.0E	5	LO	250	N	Y	19910406	091832	245	154	73	13
82	78	EGYPT	MT. JARF, RED SEA COAST	23.3N	35.5E	21.1N	34.3E	5	LO	250	N	Y	19910406	091837	245	155	73	13
82	79	EGYPT	MT. JARF, RED SEA COAST	22.6N	35.7E	21.0N	34.5E	10	LO	250	N	Y	19910406	091840	245	155	74	13
82	89	EGYPT	COAST RANGE, PORT SUDAN	19.6N	36.7E	20.3N	36.4E	15	NV	250	N	Y	19910406	091912	245	162	75	13
82	90	EGYPT	COAST RANGE, RED SEA CST	19.0N	37.0E	20.2N	36.7E	15	NV	250	N	Y	19910406	091917	245	163	75	13
90	1	EGYPT	GULF KEBIR PLAT, SAND STM	23.5N	25.5E	23.5N	26.7E	0	LO	250	N	N	19910406	091633	246	137	67	13
90	2	EGYPT	E-W ROCK RIDGE, G. KEBIR	23.5N	27.5E	23.2N	27.9E	0	NV	250	N	N	19910406	091652	246	139	68	13
90	3	EGYPT	GULF KEBIR PLAT, SAND STM	23.5N	25.5E	23.0N	28.6E	0	LO	250	N	N	19910406	091703	246	141	69	13
90	4	EGYPT	LAKE MASSER	22.5N	31.8E	22.1N	31.3E	0	NV	250	N	N	19910406	091747	245	147	71	13
90	8	EGYPT	NUBIAN DES, WADI ALLAQI	22.4N	34.0E	21.1N	34.3E	0	LO	250	N	N	19910406	091837	245	155	73	13
94	71	EGYPT	GULF KEBIR PLATEAU	26.5N	28.0E			5	LO	100	N	N						
94	72	EGYPT	NILE RIVER VALLEY	26.0N	30.5E			0	LO	100	N	Y						
94	77	EGYPT	NUBIAN DES., RED SEA	22.0N	35.5E			15	LO	100	N	N						
97	19	EGYPT	CENTRAL, NILE, SINAI	27.5N	30.0E	24.5N	23.1E	5	HO	250	N	N	19910406	091536	246	132	64	13
97	20	EGYPT	SO. CENTRAL, NILE			24.1N	24.6E	5	HO	250	N	N	19910406	091600	246	134	65	13
97	21	EGYPT	SO. CENTRAL, NILE			24.0N	25.2E	5	HO	250	N	N	19910406	091609	246	135	66	13
97	22	EGYPT	NILE VALLEY, SINAI	28.5N	32.0E	23.8N	25.7E	0	HO	250	N	N	19910406	091618	246	136	66	13
97	23	EGYPT	NILE VALLEY, SINAI	28.5N	29.0E	23.6N	26.4E	0	HO	250	N	N	19910406	091628	246	137	67	13
97	24	EGYPT	LAKE MASSER	22.7N	32.8E	23.3N	27.5E	5	LO	250	N	N	19910406	091646	246	139	68	13
97	25	EGYPT	NILE RIVER, RED SEA	25.8N	33.8E	23.0N	28.4E	5	LO	250	N	N	19910406	091701	246	141	69	13
97	26	EGYPT	NILE RIVER, RED SEA, SINAI	29.5N	33.5E	22.9N	28.9E	0	LO	250	N	N	19910406	091709	246	142	69	13
97	27	EGYPT	NILE RIVER, RED SEA, SINAI	29.5N	34.0E	22.6N	29.7E	0	HO	250	N	N	19910406	091721	246	143	70	13
97	28	EGYPT	ARABIAN DESERT			22.4N	30.4E	10	LO	250	N	N	19910406	091732	245	144	70	13
97	29	EGYPT	SE. EGYPT	23.0N	34.0E	22.2N	31.0E	5	LO	250	N	N	19910406	091743	245	146	71	13
97	30	EGYPT	SE. EGYPT, RED SEA			21.4N	33.3E	10	LO	250	N	N	19910406	091820	245	152	73	13
151	91	C EGYPT	SOMALIA JET STREAM-NILE			24.5N	32.7E	90	LO	250	N	N	19910406	041954	246	87	9	10
151	120	EGYPT	NILE RIVER DELTA	31.0N	30.5E	27.9N	27.5E	10	LO	250	N	Y	19910406	055801	246	96	26	11

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	LOW	LAT	LOW	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
151	121	EGYPT	NILE RIVER DELTA	31.0N	31.0E	27.9N	28.3E	15	LO	250	N	Y	19910406	055812	246	97	26	11
151	122	EGYPT	NILE RIVER DELTA	31.0N	32.0E	28.2N	31.5E	10	LO	250	N	Y	19910406	055859	246	99	29	11
151	123	EGYPT	SINAI PENINSULA	28.5N	33.5E	28.3N	32.7E	0	NV	250	N	Y	19910406	055917	246	100	30	11
151	208	EGYPT	ROCKY DESERT-AL KUFRAH	24.5N	24.5E	24.4N	23.5E	0	NV	250	N	Y	19910406	091542	246	132	64	13
151	209	EGYPT	GLIF KEBIR PLATEAU	24.0N	25.5E	24.1N	24.7E	0	NV	250	N	Y	19910406	091601	246	134	65	13
151	210	EGYPT	GREAT SAND SEA	25.5N	27.5E	23.9N	25.4E	0	LO	250	N	Y	19910406	091613	246	135	66	13
151	211	EGYPT	GLIF KEBIR PLATEAU	24.0N	27.0E	23.7N	26.1E	0	NV	250	N	Y	19910406	091623	246	136	67	13
151	212	EGYPT	GREAT SAND SEA	24.0N	28.0E	23.4N	27.3E	0	NV	250	N	Y	19910406	091642	246	138	68	13
151	213	EGYPT	ROCKY AREA	23.0N	28.5E	23.1N	28.2E	0	NV	250	N	Y	19910406	091657	246	140	68	13
151	214	EGYPT	LAKE MASSER	22.5N	30.5E	22.6N	29.8E	0	NV	250	N	Y	19910406	091723	246	143	70	13
151	215	EGYPT	LAKE MASSER	22.0N	31.5E	22.2N	31.0E	5	NV	250	N	Y	19910406	091742	245	146	71	13
151	216	EGYPT	NUBIAN DESERT	22.0N	33.0E	21.8N	32.1E	25	NV	250	N	Y	19910406	091801	245	149	72	13
151	217	EGYPT	NUBIAN DESERT	21.5N	34.0E	21.4N	33.4E	25	NV	250	N	Y	19910406	091822	245	152	73	13
151	218	EGYPT	NUBIAN DESERT	21.5N	35.0E	21.1N	34.2E	15	NV	250	N	Y	19910406	091834	245	154	73	13
151	219	EGYPT	NUBIAN DESERT	21.0N	35.5E	20.9N	34.9E	5	NV	250	N	Y	19910406	091846	245	156	74	13
151	220	EGYPT	COAST-VUDEB WADI	20.0N	36.5E	20.0N	35.6E	10	NV	250	N	Y	19910406	091858	245	159	74	13
151	221	EGYPT	COAST-RED SEA	20.0N	37.0E	20.3N	36.3E	20	NV	250	N	Y	19910406	091910	245	161	75	13
152	78	EGYPT	SALT PANS NEAR QATTARA D	28.5N	27.0E	27.6N	26.7E	0	NV	250	N	Y	19910407	051853	246	91	17	26
152	79	EGYPT	NILE R. VALLEY-G.OF SUEZ	27.5N	31.5E	27.7N	27.9E	0	LO	250	N	Y	19910407	051911	246	91	18	26
152	80	EGYPT	GR. BITTER L.-FIRES,NILE	30.5N	33.0E	27.8N	28.6E	0	LO	250	N	Y	19910407	051922	246	92	18	26
152	81	EGYPT	SINAI PEN.-G.OF AQABA	28.5N	34.5E	28.2N	33.1E	0	NV	250	N	Y	19910407	052028	246	94	23	26
152	83	EGYPT	SINAI PEN.-SUEZ CANAL	30.5N	33.5E	28.4N	35.7E	0	LO	250	N	Y	19910407	052106	246	96	25	26
152	166	EGYPT	QATTARA DEPRESSION	30.0N	29.0E	28.1N	28.4E	0	LO	250	N	Y	19910407	065833	247	106	40	27
152	167	EGYPT	QATTARA DEP., NILE DELTA	30.0N	30.0E	28.0N	29.3E	0	LO	250	N	Y	19910407	065847	247	106	41	27
152	168	EGYPT	LAKE QARUN-NILE DELTA	30.0N	30.5E	27.9N	30.3E	0	LO	250	N	Y	19910407	065901	247	107	41	27
152	169	EGYPT	NILE-CAIRO	29.5N	31.0E	27.8N	30.9E	0	LO	250	N	Y	19910407	065910	247	107	42	27
152	170	EGYPT	GULF OF SUEZ-CAIRO	29.5N	32.5E	27.7N	31.9E	0	LO	250	N	Y	19910407	065925	247	108	43	27
152	171	EGYPT	SINAI PEN.-GULF OF SUEZ	29.5N	33.0E	27.6N	33.3E	0	LO	250	N	Y	19910407	065945	247	109	44	27
152	172	EGYPT	SINAI PEN.-WADI GERARA	30.5N	34.0E	27.5N	34.0E	0	LO	250	N	Y	19910407	065956	246	109	45	27
152	252	EGYPT	GLIF KEBIR PLATEAU	23.5N	25.0E	24.6N	24.8E	0	LO	250	N	Y	19910407	083706	246	120	58	28
152	253	EGYPT	GREAT SAND SEA	25.0N	26.0E	24.4N	25.4E	0	NV	250	N	Y	19910407	083715	246	121	59	28
152	254	EGYPT	GREAT SAND SEA	25.5N	27.0E	23.9N	27.3E	5	LO	250	N	Y	19910407	083745	246	122	61	28
152	257	EGYPT	LAKE MASSER	23.5N	32.0E	22.2N	32.9E	75	LO	250	N	Y	19910407	083914	246	129	66	28
85	9	EL SALVADOR	COAST WETLANDS,SE SAN SA	13.2N	88.7W	14.6N	89.8W	40	LO	250	N	Y	19910408	172702	246	130	78	49
85	10	EL SALVADOR	GULF OF FONSECA,SUNGLNT	13.3N	87.6W	14.0N	88.6W	0	LO	250	N	Y	19910408	172723	246	133	80	49
151	13	EL SALVADOR	SAN SALVADOR	13.5N	89.0W	12.2N	90.7W	45	LO	250	N	Y	19910405	192330	244	253	69	4
14	25	ETHIOPIA	L. TANA, DANAKIL DEPRESS	15.0N	38.0E	15.2N	32.3E	15	HO	35	N	Y	19910410	082238	247	106	67	74
14	26	ETHIOPIA	L. TANA, DANAKIL DEPRESS	14.0N	41.0E	14.6N	33.5E	15	HO	35	N	Y	19910410	082300	247	106	68	74
14	28	ETHIOPIA	DANAKIL DEP., ERTA ALE	13.0N	42.0E	13.5N	35.8E	20	HO	35	N	Y	19910410	082341	247	105	71	74
14	30	ETHIOPIA	HIGHLANDS, ERTA ALE VOL.	14.0N	39.0E	12.4N	38.1E	20	LO	35	N	Y	19910410	082422	247	104	73	74

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		MADIR		CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM	
				LAT	LONG	LAT	LONG										EL	OR
56	7	ETHIOPIA	BLUE NILE RIVER	10.0N	36.0E	14.4N	36.8E	30	LO	35	N	N	19910411	074521	247	99	62	89
56	8	ETHIOPIA	MT. RASDAJAN	13.0N	38.0E	13.7N	37.2E	10	LO	35	N	N	19910411	074545	247	99	63	89
84	1	ETHIOPIA	BLUE NILE, GUNA PEAK	11.5N	38.0E			5	NV	250	N	N						
84	2	ETHIOPIA	LAKE TANA	12.0N	37.0E			10	LO	250	N	N						
84	3	ETHIOPIA	LAKE TANA	12.0N	37.5E			5	LO	250	N	N						
84	4	ETHIOPIA	AWASH RIVER	11.0N	40.0E			0	NV	250	N	N						
84	5	ETHIOPIA	AWASH RIVER, L. YARDI	10.5N	40.5E			0	NV	250	N	N						
84	6	ETHIOPIA	AWASH RIVER, L. YARDI	10.0N	40.5E			0	NV	250	U	Y						
84	7	ETHIOPIA	AWASH RIVER, L. YARDI	10.0N	40.0E			0	NV	250	N	N						
84	8	ETHIOPIA	AWASH RIVER, L. YARDI	9.5N	40.5E			10	NV	250	N	N						
84	9	ETHIOPIA	AWASH RIVER, RIFT VALLEY	9.0N	40.0E			15	NV	250	N	N						
88	28	ETHIOPIA	LAKE TANA	12.0N	37.2E	12.5N	35.8E	10	LO	250	N	N	19910409	090235	246	118	79	59
88	29	ETHIOPIA	LAKE TANA, SUNGLINT	11.9N	37.3E	11.9N	36.9E	10	LO	250	N	N	19910409	090255	246	119	81	59
88	30	ETHIOPIA	BLUE NILE, SNGLT, BESHLO R	11.0N	38.3E	11.3N	38.1E	15	LO	250	N	N	19910409	090316	246	120	82	59
88	31	ETHIOPIA	DAMAKIL DEPR, AFRERA LAKE	13.4N	41.2E	10.4N	39.8E	10	LO	250	N	N	19910409	090348	246	122	84	59
88	32	ETHIOPIA	AFAR DEPRESSION, COAST	13.2N	41.8E	10.3N	39.9E	0	LO	250	N	N	19910409	090350	246	122	84	59
88	33	ETHIOPIA	AFAR DEPR. HALBA I, COAST	12.6N	42.8E	10.3N	40.1E	5	LO	250	N	N	19910409	090353	246	122	84	59
88	35	ETHIOPIA	AFAR DEPRESSION			9.9N	40.8E	25	LO	250	U	N	19910409	090407	246	123	85	59
94	97	ETHIOPIA	RIFT VALLEY, AWASH RIVER	10.5N	40.5E			25	LO	100	N	N						
94	99	ETHIOPIA	DAMAKIL DEP., ERTE ALLE	12.5N	40.5E			15	HO	100	N	N						
95	91	ETHIOPIA	ETHIOPIAN PLATEAU, RESVR	9.2N	36.3E	9.3N	36.1E	60	LO	250	N	N	19910406	105935	244	263	69	14
95	92	ETHIOPIA	ETHIOPIAN PLATEAU, LAKES	6.0N	37.8E	9.0N	36.7E	60	LO	250	N	N	19910406	105946	244	264	68	14
95	93	ETHIOPIA	RIFT VALLEY, LAKE			8.7N	37.2E	70	LO	250	N	N	19910406	105956	244	265	68	14
95	94	ETHIOPIA	RIFT VALLEY, ABAYA	6.3N	37.8E	8.0N	38.5E	60	LO	250	N	N	19910406	110020	243	267	67	14
95	95	ETHIOPIA	ETHIOPIAN PLATEAU			7.3N	39.8E	80	LO	250	N	N	19910406	110044	243	269	65	14
95	96	ETHIOPIA	SE ETHIOPIA			6.8N	40.7E	40	LO	250	N	N	19910406	110102	243	270	64	14
95	97	ETHIOPIA	SE ETHIOPIA			6.7N	40.9E	30	LO	250	N	N	19910406	110105	243	270	64	14
95	98	ETHIOPIA	SE ETHIOPIA			6.5N	41.1E	30	LO	250	N	N	19910406	110109	243	271	64	14
95	99	ETHIOPIA	SE ETHIOPIA			6.2N	41.6E	30	LO	250	N	N	19910406	110119	243	271	63	14
95	100	ETHIOPIA	SE ETHIOPIA, RED SOILS			5.9N	42.2E	20	LO	250	N	N	19910406	110130	243	272	63	14
95	101	ETHIOPIA	SE ETHIOPIA, RED SOILS			5.7N	42.6E	50	LO	250	N	N	19910406	110137	243	272	62	14
95	102	ETHIOPIA	SE ETHIOPIA, RED SOILS			5.6N	42.8E	40	LO	250	N	N	19910406	110141	243	273	62	14
95	103	ETHIOPIA	SE ETHIOPIA, RED SOILS			5.5N	43.0E	30	LO	250	N	N	19910406	110145	243	273	62	14
95	104	ETHIOPIA	SE ETHIOPIA, RED SOILS					40	LO	250	N	N						
96	94	ETHIOPIA	BLUE NILE, PLATEAU	10.5N	35.5E			5	LO	100	N	N						
96	95	ETHIOPIA	LAKE TANA	12.0N	37.0E			10	NV	100	N	N						
96	96	ETHIOPIA	LAKE TANA	12.0N	37.5E			10	NV	100	U	N						
96	97	ETHIOPIA	FERIT MTN., CITY OF DESE	11.0N	39.5E			10	LO	100	N	N						
96	98	ETHIOPIA	AFAR, DANAKIL PLAIN	12.0N	41.0E			10	LO	100	N	N						
96	99	ETHIOPIA	RIFT VALLEY, AWASH RIVER	10.0N	40.5E			30	LO	100	N	N						

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	NADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
96	102	ETHIOPIA	DESERT, CLOUDS			75	LO	100	N	N	19910406	105843	244	256	72	14
97	91	ETHIOPIA	PANORAMA, GULF ADEN		10.8N 33.3E	60	HO	250	N	N	19910406	110038	243	268	66	14
97	93	ETHIOPIA	PANORAMA		7.5N 39.5E	60	LO	250	N	N	19910406	110106	243	270	64	14
97	94	ETHIOPIA	SOMALI, E. TIP OF AFRICA		6.6N 40.9E	70	HO	250	N	N	19910406	110114	243	271	64	14
97	95	ETHIOPIA	SOMALI, E. TIP OF AFRICA		6.4N 41.4E	70	HO	250	N	N	19910406	110123	243	271	63	14
97	96	ETHIOPIA	SOMALI, E. TIP OF AFRICA		6.1N 41.8E	70	HO	250	N	N	19910407	102012	244	246	78	29
98	59	ETHIOPIA	LAKE TANA	12.0N 37.3E	10.9N 35.0E	60	LO	250	N	N	19910407	102036	244	253	78	29
98	60	ETHIOPIA	LAKE ABAYA	6.5N 37.9E	10.2N 36.3E	70	LO	250	N	N	19910407	102046	244	255	78	29
98	61	ETHIOPIA	RIFT VALLEY LAKES	7.6N 38.6E	10.0N 36.9E	60	LO	250	N	N	19910407	102049	244	255	78	29
98	62	ETHIOPIA	RIFT VALLEY LAKES	8.0N 38.9E	9.9N 37.0E	60	LO	250	N	N	19910407	102147	244	265	75	29
98	63	ETHIOPIA	DANAKIL DEPRESSION	13.5N 40.8E	8.2N 40.1E	30	LO	250	N	N	19910406	091929	245	165	76	13
151	222	ETHIOPIA	COAST-DEHALAK ISLAND	16.5N 39.0E	19.9N 37.5E	40	LO	250	N	N	19910406	110022	243	267	67	14
152	1	ETHIOPIA	LAKE ABAYA, LAKE CH'AMO	6.5N 37.5E	7.9N 38.6E	70	LO	250	N	N	19910406	110118	243	271	63	14
152	2	ETHIOPIA	GENALE RIVER	5.0N 41.5E	6.3N 41.6E	60	LO	250	N	Y	19910406	110122	243	272	63	14
152	3	ETHIOPIA	WABE GESTRO RIVER	6.0N 41.5E	6.2N 41.8E	50	NV	250	N	Y	19910406	110127	243	273	62	14
152	4	ETHIOPIA	KUS DULAMC MOUNTAINS	7.0N 42.5E	6.0N 42.0E	40	NV	250	N	Y	19910406	110143	243	273	62	14
152	5	ETHIOPIA	SHEBELE RIVER	5.0N 44.5E	5.5N 42.9E	40	LO	250	N	N	19910406	171530	243	273	63	18
75	102	FRENCH GUIANA	KOUROU AREA, COAST	6.0N 52.3W	5.5N 52.5W	60	LO	250	N	N	19910406	171537	243	273	63	18
75	103	FRENCH GUIANA	BORDER WITH BRAZIL	5.2N 51.8W	5.2N 52.1W	70	LO	250	N	N	19910406	171520	243	272	65	18
79	34	FRENCH GUIANA	MAHURY RIVER, CAYENNE	5.0N 52.5W	5.8N 53.0W	40	LO	250	N	N	19910406	171559	243	275	62	18
90	117	FRENCH GUIANA	RIO CALCOENE, NAZARE, CST	2.6N 50.8W	4.6N 50.9W	80	LO	250	N	N	19910406	141255	242	282	47	16
77	84	GABON	CLDY, COASTLINE	2.8S 10.2E	2.4S 8.7E	70	LO	250	N	N	19910406	141258	242	282	47	16
77	85	GABON	T-STORM, CLDY		2.5S 8.9E	80	LO	250	N	N	19910409	121558	246	298	75	61
80	43	GABON	OGOUE R., L. ONANGUE	1.0S 10.0E	0.8N 9.0E	75	LO	250	N	Y	19910409	121602	246	298	75	61
80	44	GABON	OGOUE R., L. ONANGUE	1.0S 9.5E	0.7N 9.2E	75	LO	250	N	Y	19910409	121609	246	298	75	61
80	45	GABON	OGOUE R., NKOMI LAGOON	1.5S 9.0E	0.5N 9.5E	60	LO	250	N	Y	19910409	121629	246	298	73	61
80	46	GABON	OGOUE R.	0.5S 11.0E	0.1S 10.6E	75	NV	250	O	N	19910409	121631	246	298	73	61
80	47	GABON	OGOUE R., L. ONANGUE	1.0S 10.5E	0.2S 10.7E	70	NV	250	O	N	19910409	121634	246	298	73	61
80	48	GABON	OGOUE R., L. ONANGUE	1.0S 10.0E	0.3S 10.9E	65	NV	250	O	N	19910409	121638	246	298	73	61
80	49	GABON	OGOUE R., NKOOMI LAGOON	1.0S 9.0E	0.4S 11.1E	75	NV	250	O	N	19910409	121642	246	298	72	61
80	50	GABON	OGOUE R., NKOOMI LAGOON	1.5S 9.0E	0.5S 11.3E	50	NV	250	O	N	19910409	121645	246	298	72	61
80	51	GABON	MBIA LAGOON	3.5S 11.0E	0.6S 11.4E	55	LO	250	O	N	19910409	121703	246	298	71	61
80	52	GABON	INLAND FROM MBIA LAGOON	0.7S 11.6E	0.7S 11.6E	75	LO	250	O	N	19910409	121706	246	298	71	61
80	56	GABON	NDOGO LAGOON	2.5S 10.0E	1.1S 12.4E	65	LO	250	O	N	19910409	121710	246	298	71	61
80	57	GABON	NDOGO LAGOON, MBIA L.	3.0S 10.5E	1.2S 12.5E	70	NV	250	O	N	19910409	121710	246	298	71	61
80	58	GABON	INLAND FROM MBIA LAGOON		1.4S 12.7E	70	LO	250	O	N	19910409	121630	246	298	73	61
87	3	GABON	CLOUDS		0.1S 10.6E	85	LO	250	N	N	19910409	121633	246	298	73	61
87	4	GABON	CLOUDS		0.2S 10.8E	90	LO	250	N	N	19910409	121643	246	298	73	61
87	5	GABON	COAST, SWAMP, LAGOONS	1.8S 9.0E	0.5S 11.3E	60	LO	250	N	Y	19910409	121646	246	298	73	61
87	6	GABON	COAST, LAGOONS	2.3S 9.4E	0.6S 11.5E	40	LO	250	U	Y	19910409	121646	246	298	72	61

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL	OR
87	7	GABON	COAST, LAGOONS	2.9S 9.9E	0.7S 11.6E	50	LO	250	U	Y	19910409	121649	246	298	72	61
87	8	GABON	COAST, LAGOON, NYANGO R.	3.5S 10.9E	0.8S 11.8E	50	LO	250	U	Y	19910409	121652	246	298	72	61
87	10	GABON	NGOUNIE RIVER	1.6S 10.8E	1.4S 12.8E	85	LO	250	U	Y	19910409	121711	246	298	71	61
87	11	GABON	NGOUNIE RIVER	1.9S 11.0E	1.5S 12.9E	85	LO	250	U	Y	19910409	121714	246	298	71	61
87	12	GABON	RIVER, CLOUDS		1.5S 13.0E	85	LO	250	U	Y	19910409	121716	246	298	70	61
87	13	GABON	CLOUDS, HILLS		1.7S 13.2E	90	LO	250	U	Y	19910409	121720	246	298	70	61
87	16	GABON	IVINDO R, OGOUE R.	0.2N 12.4E	2.5S 14.7E	85	LO	250	N	Y	19910409	121747	246	298	68	61
44	10	GALAPAGOS ISLANDS	PANORAMA	0.5S 89.0W	2.4N 87.3W	15	LO	35	N	N	19910410	175050	248	359	84	80
73	3	GALAPAGOS ISLANDS	ISABELA, FERNANDINA ISLS.	0.4S 91.4W	1.6N 93.5W	60	LO	100	N	N	19910406	202430	243	279	57	20
73	4	GALAPAGOS ISLANDS	ISLA SAN CRISTOBAL	0.8S 89.5W	0.1N 90.9W	30	LO	250	N	N	19910406	202520	243	281	54	20
73	5	GALAPAGOS ISLANDS	ISLA SANTA CRUZ	0.6S 90.4W	0.0N 90.8W	50	LO	250	N	N	19910406	202523	243	281	54	20
73	6	GALAPAGOS ISLANDS	ISLA ISABELA	0.8S 91.1W	0.2S 90.5W	60	LO	250	N	N	19910406	202527	243	281	54	20
73	7	GALAPAGOS ISLANDS			0.4S 90.1W	15	LO	250	N	N	19910406	202535	243	281	53	20
81	82	GALAPAGOS ISLANDS	FERNANDINA, ISABELA IS.	0.0 91.5W	0.3N 93.2W	35	LO	250	N	Y	19910405	210339	243	278	47	5
81	83	GALAPAGOS ISLANDS	FERNANDINA, ISABELA IS.	0.5S 91.5W	0.2N 93.0W	35	LO	250	N	Y	19910405	210342	243	278	47	5
81	84	GALAPAGOS ISLANDS	FERNANDINA, ISABELA IS.	0.5S 91.0W	0.1N 92.9W	30	LO	250	N	Y	19910405	210345	243	278	47	5
81	85	GALAPAGOS ISLANDS	FERNANDINA IS.	0.5S 91.0W	0.0N 92.7W	35	LO	250	N	Y	19910405	210348	243	279	47	5
81	86	GALAPAGOS ISLANDS	FERNANDINA IS.	1.0S 91.0W	0.2S 92.4W	25	NV	250	N	Y	19910405	210353	243	279	46	5
81	87	GALAPAGOS ISLANDS	SAN SALVADOR, ST. CRUZ	0.5S 90.5W	0.3S 92.2W	25	LO	250	N	Y	19910405	210357	243	279	46	5
81	88	GALAPAGOS ISLANDS	SANTA CRUZ ISLAND	0.5S 90.5W	0.4S 92.0W	20	NV	250	N	Y	19910405	210401	243	279	46	5
81	89	GALAPAGOS ISLANDS	SAN CRISTOBAL ISLAND	1.0S 89.5W	1.5S 90.1W	5	NV	250	N	N	19910405	210437	243	280	44	5
91	75	GALAPAGOS ISLANDS	I. FERNANDINA, I. ISABELA	0.5S 91.5W	0.6S 91.7W	40	NV	250	U	Y	19910405	210407	243	279	45	5
91	76	GALAPAGOS ISLANDS	I. ISABELA, VERY DARK	1.0S 91.0W	0.7S 91.5W	70	NV	250	U	Y	19910405	210411	243	279	45	5
91	77	GALAPAGOS ISLANDS	ISLA SANTA CRUZ, DARK	0.5S 90.5W	0.9S 91.2W	50	NV	250	U	Y	19910405	210416	243	279	45	5
91	78	GALAPAGOS ISLANDS	I. STA CRUZ, I. SAN SALVAD.	0.5S 90.5W	1.0S 91.1W	60	NV	250	U	Y	19910405	210419	243	279	45	5
91	79	GALAPAGOS ISLANDS	ISLA SAN CRISTOBAL, DARK	1.0S 89.5W	1.2S 90.7W	10	NV	250	U	N	19910405	210426	243	279	44	5
92	22	GALAPAGOS ISLANDS	FERNANDINA	0.5S 91.5W	1.3N 93.0W	60	LO	250	N	N	19910406	202440	243	280	57	20
92	23	GALAPAGOS ISLANDS	SAN SALVADOR, SANTA CRUZ	0.4S 90.5W	1.1N 92.6W	60	LO	250	N	N	19910406	202447	243	280	56	20
92	24	GALAPAGOS ISLANDS	PINTA, MARCHENA	0.5N 90.5W	0.9N 92.3W	30	LO	250	N	N	19910406	202453	243	280	56	20
94	36	GALAPAGOS ISLANDS	SUNGLINT, INT. WAVES	0.5S 90.5W		15	LO	100	N	N						
152	71	GALAPAGOS ISLANDS	SAN SALVADOR, ISABELA ISLS	0.5S 90.5W	0.9S 89.2W	25	NV	250	N	N	19910406	202552	243	281	52	20
84	65	GAMBIA	GAMBIA RIVER	13.5N 16.5W		0	LO	250	N	Y						
86	78	GAMBIA	BANJUL AREA, GAMBIA RVR	13.5N 17.0W	14.2N 17.2W	0	LO	250	N	N	19910408	124655	246	139	80	46
86	79	GAMBIA	BANJUL AREA, GAMBIA RVR	13.5N 16.8W	14.0N 16.9W	0	LO	250	N	N	19910408	124700	246	140	81	46
86	80	GAMBIA	BANJUL AREA, GAMBIA RVR	13.2N 16.7W	13.9N 16.6W	0	LO	250	N	N	19910408	124705	246	141	81	46
86	81	GAMBIA	BANJUL AREA, GAMBIA RVR	13.4N 16.2W	13.8N 16.5W	0	LO	250	N	N	19910408	124708	246	141	81	46
86	82	GAMBIA	GAMBIA RIVER, INLAND	13.5N 15.5W	13.7N 16.3W	0	LO	250	N	N	19910408	124712	246	142	81	46
86	83	GAMBIA	GAMBIA RIVER, INLAND	13.7N 15.0W	13.6N 16.0W	0	LO	250	N	N	19910408	124717	246	143	82	46
86	84	GAMBIA	GAMBIA RIVER, BANJUL AREA	13.3N 16.6W	12.7N 14.3W	0	LO	250	N	N	19910408	124748	246	152	83	46
96	41	GAMBIA	DAKAR, GAMBIA R., GEBE R	13.5N 15.5W		0	LO	100	N	Y						



TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL	OR
153	OC6	GAMBIA	GAMBIA, SADOUM RIVERS	13.5N 16.5W		0	LO	250	N	Y	19910409	121214	246	121	89	61
80	27	GHANA	BUI RESERVOIR	8.5N 2.5W	7.6N 2.8W	40	NV	250	N	Y	19910409	121216	246	126	89	61
80	28	GHANA	BUI RESERVOIR	8.0N 2.5W	7.5N 2.7W	50	NV	250	N	Y	19910409	121219	246	284	89	61
80	29	GHANA	HIGHLANDS W. OF L. VOLTA		7.6N 2.5W	60	NV	250	N	Y	19910409	121222	246	293	89	61
80	30	GHANA	HIGHLANDS W. OF L. VOLTA		7.4N 2.4W	60	NV	250	N	Y	19910409	121226	246	295	89	61
80	31	GHANA	HIGHLANDS W. OF L. VOLTA		7.2N 2.1W	80	NV	250	N	Y	19910409	121228	246	296	89	61
80	32	GHANA	HIGHLANDS W. OF L. VOLTA		7.2N 2.0W	85	NV	250	N	Y	19910409	121233	246	298	89	61
80	33	GHANA	HIGHLANDS NEAR L. VOLTA		7.0N 1.8W	75	NV	250	N	Y	19910409	121241	246	297	88	61
80	34	GHANA	HIGHLANDS NEAR L. VOLTA		6.8N 1.3W	55	LO	250	N	Y	19910409	121251	246	297	87	61
80	35	GHANA	VOLTA R., KETA LAGOON	6.0N 0.5E	6.5N 0.8W	30	LO	250	N	Y	19910409	121304	246	297	87	61
80	38	GHANA	CITY OF ACCRA	5.5N 0.5W	6.1N 0.1W	35	LO	250	N	Y	19910409	121311	246	297	86	61
80	39	GHANA	WINNEBA, CAPE COAST	5.0N 0.5W	5.9N 0.2E	45	LO	250	N	Y	19910409	121318	246	297	86	61
80	40	GHANA	VOLTA R., SONGAW LAGOON	6.0N 0.5E	5.7N 0.6E	50	LO	250	N	Y	19910409	121412	246	298	82	61
87	1	GHANA	ACCRA, COAST	5.0N 0.0	4.1N 3.4E	30	L	250	N	Y	19910409	121226	246	295	89	61
88	115	GHANA	AGR. V. DARK		7.2N 2.1W	40	LO	250	N	Y	19910409	121229	246	296	89	61
88	116	GHANA	AGR. V. DARK		7.2N 2.0W	30	LO	250	N	Y	19910409	121232	246	296	89	61
88	117	GHANA	AGR. V. DARK		7.1N 1.8W	35	LO	250	N	Y	19910409	121237	246	296	88	61
88	118	GHANA	AGR. V. DARK		6.9N 1.6W	75	LO	250	N	Y	19910409	121242	246	297	88	61
88	119	GHANA	AGR. V. DARK, CLOUDS		6.8N 1.3W	90	LO	250	N	Y	19910409	121249	246	297	88	61
88	120	GHANA	AGR. V. DARK, CLOUDS		6.6W 0.9W	90	LO	250	N	Y	19910409	121316	246	297	86	61
88	121	GHANA	VOLTA R/DELTA, COAST	5.9N 0.8E	5.8N 0.5E	25	NV	250	N	Y	19910409	121316	246	292	69	53
85	34	GILBERT ISLANDS	CHRISTMAS IS.	2.0N 157.4W	0.3S 158.1W	60	LO	250	N	Y	19910408	192311	244	251	70	4
91	21	GUATEMALA	ANGOSTURA RESERVOIR	15.5N 92.0W	12.8N 91.7W	80	LO	250	N	Y	19910405	192311	244	251	70	4
94	16	GUATEMALA	COAST	14.0N 91.0W		55	LO	100	N	Y						
74	46	GUINEA	VRY HIGH OBLIQUE		2.0N 18.9W	5	HO	250	N	Y	19910409	134844	245	300	82	62
77	77	GUINEA	CONAKRY AREA, HAZY	9.5N 13.8W	10.3N 13.4W	5	LO	250	N	Y	19910408	140554	244	258	72	16
77	78	GUINEA	COASTAL AREA N. OF CONAKRY	10.0N 14.6W	9.9N 12.6W	0	LO	250	N	Y						
84	79	GUINEA	KOULONTOU, CORUBAL R.	12.5N 13.5W		0	NV	250	N	Y						
84	84	GUINEA	GAMBIA RIVER	12.5N 13.0W		0	LO	250	N	Y						
84	85	GUINEA	TOMINE RIVER	12.0N 13.5W		0	NV	250	N	Y						
84	86	GUINEA	TOMINE, KOMBE RIVERS	11.5N 13.0W		0	NV	250	N	Y						
84	87	GUINEA	LOMA HILLS, KOMBE RIVER	11.5N 13.0W		0	NV	250	N	Y						
84	88	GUINEA	LOMA HILLS, KOMBE RIVER	11.5N 12.5W		0	NV	250	N	Y						
84	89	GUINEA	LOMA HILLS, TOMINE R.	11.5N 13.5W		0	NV	250	N	Y						
84	90	GUINEA	LOMA HILLS	11.0N 13.0W		0	NV	250	N	Y						
84	91	GUINEA	LOMA HILLS	11.5N 12.5W		0	NV	250	N	Y						
84	95	GUINEA	BAFING RIVER	12.0N 10.5W		0	LO	250	N	Y						
84	96	GUINEA	BAFING RIVER	11.5N 11.0W		0	LO	250	N	Y						
84	97	GUINEA	BAFING RIVER, LOMA HILLS	11.5N 10.5W		0	LO	250	N	Y						
84	98	GUINEA	BAFING RIVER, LOMA HILLS			0	LO	250	N	Y						

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	NADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL	OR
84	99	GUINEA	BAFING RIVER, LOMA HILLS	12.0N 10.5W		0	LO	250	N	N						
84	100	GUINEA	TINKISSI RIVER	11.5N 10.5W		0	LO	250	N	Y						
84	101	GUINEA	TINKISSI RIVER	11.0N 10.0W		0	LO	250	N	Y						
84	102	GUINEA	NIGER RIVER	11.0N 9.5W		0	LO	250	N	Y						
84	103	GUINEA	NIGER RIVER	10.5N 9.5W		0	LO	250	N	Y						
84	104	GUINEA	NIGER RIVER	10.5N 10.0W		0	LO	250	N	Y						
86	87	GUINEA	N.CENTRAL,SUNGLINT RIVRS		12.0N 12.9W	0	LO	250	N	N	19910408	124813	246	164	84	46
86	88	GUINEA	UNIDENTIFIED RESERVOIR		11.5N 12.0W	0	LO	250	N	N	19910408	124829	246	174	85	46
86	89	GUINEA	INLAND AREA		11.2N 11.3W	0	LO	250	N	N	19910408	124843	246	185	85	46
86	90	GUINEA	NIGER RIVER	11.0N 9.0W	10.5N 10.0W	0	LO	250	N	N	19910408	124908	246	206	86	46
86	91	GUINEA	NIGER RIVER AREA/TRIBUTY		10.3N 9.7W	20	LO	250	N	N	19910408	124912	246	212	86	46
86	80	GUINEA	COAST, VERY DARK		13.4N 13.8W	0	LO	250	N	N	19910409	120851	246	115	76	61
86	86	GUINEA	TOMINE R, AGR, DARK	12.2N 13.6W	12.7N 12.3W	0	LO	250	N	N	19910409	120918	246	115	78	61
88	90	GUINEA	BAFING R, AGR.	12.1N 10.5W	12.0N 11.0W	0	NV	250	U	Y	19910409	120942	246	116	79	61
88	91	GUINEA	BAFING R, AGR.	11.6N 10.8W	11.9N 10.8W	0	NV	250	U	Y	19910409	120945	246	116	80	61
88	92	GUINEA	HILLS, AGR, DARK		11.9N 10.7W	0	LO	250	N	N	19910409	120947	246	116	80	61
88	93	GUINEA	TINKISSO RIVER,AGR,DARK	11.4N 10.0W	11.7N 10.5W	0	NV	250	U	Y	19910409	120951	246	116	80	61
88	94	GUINEA	TINKISSO R,NIGER R,DARK	11.2N 9.6W	11.6N 10.2W	0	NV	250	U	Y	19910409	120956	246	116	80	61
88	95	GUINEA	TINKISSO R,NIGER R,AGR.	11.1N 9.2W	11.4N 9.8W	0	NV	250	U	Y	19910409	121004	246	116	81	61
88	96	GUINEA	NIGER R,MILO R,AGR,DARK	10.7N 9.2W	11.2N 9.4W	5	NV	250	U	Y	19910409	121010	246	116	81	61
88	97	GUINEA	NIGER R,FIE R,AGR,DARK	11.3N 9.0W	10.8N 8.6W	5	NV	250	U	Y	19910409	121025	246	116	82	61
88	99	GUINEA	NIGER R,MILO R,AGR,DARK	10.6N 9.2W	10.3N 7.8W	5	LO	250	N	N	19910409	121041	246	116	83	61
88	100	GUINEA	SANKARANI R,TRIBUTARY,DK	10.0N 8.5W	10.2N 7.6W	0	LO	250	N	N	19910409	121044	246	116	83	61
152	46	GUINEA	COAST-SHUTTLE TAIL	10.0N 14.5W	23.1S 163.7W	10	NV	250	N	Y	19910408	050525	243	275	-4	10
152	47	GUINEA	CONAKRY-SHUTTLE TAIL	9.5N 13.5W	10.8N 14.4W	30	LO	250	N	Y	19910408	140537	244	256	73	16
153	OCK	GUINEA	LOMA HILLS, TOMINE RIVER	12.0N 13.0W		0	LO	250	N	Y						
153	OCL	GUINEA	LOMA HILLS	12.0N 12.0W		0	LO	250	N	Y						
153	OCM	GUINEA	LOMA HILLS			40	LO	250	N	N						
74	45	GUINEA BISSAU	SENEGAL		2.2N 17.3W	5	HO	250	N	N	19910409	134837	245	300	82	62
77	70	GUINEA BISSAU	COAST AREA,RIO CACHEU		12.2N 17.1W	0	LO	250	N	N	19910406	140447	244	247	75	16
77	71	GUINEA BISSAU	ARQUIPELAGO DOS BIJAGOS	11.5N 15.9W	12.1N 16.9W	0	LO	250	N	N	19910406	140451	244	248	75	16
77	72	GUINEA BISSAU	ARQUIPELAGO DOS BIJAGOS	11.5N 16.2W	12.0N 16.8W	0	LO	250	N	N	19910406	140453	244	248	75	16
77	73	GUINEA BISSAU	ARQUIPELAGO DOS BIJAGOS		11.8N 16.3W	0	LO	250	N	N	19910406	140502	244	250	74	16
77	74	GUINEA BISSAU	SUNGLINT COASTAL WATERS		11.3N 15.3W	0	LO	250	N	N	19910406	140519	244	253	74	16
77	75	GUINEA BISSAU	SUNGLINT COASTAL WATERS		11.0N 14.9W	0	LO	250	N	N	19910406	140528	244	254	73	16
77	76	GUINEA BISSAU	SUNGLINT COASTAL WATERS		10.6N 14.0W	0	LO	250	N	N	19910406	140543	244	256	72	16
84	68	GUINEA BISSAU	CAHEU, MANSOA RIVERS	12.0N 16.0W		0	LO	250	N	Y						
84	69	GUINEA BISSAU	GEBA RIVER	12.0N 15.5W		0	LO	250	N	Y						
84	77	GUINEA BISSAU	CASAMANCE, GEBA RIVERS	12.5N 15.0W		0	NV	250	N	Y						
84	78	GUINEA BISSAU	GEBA, CORUBAL RIVERS	12.5N 14.5W		0	NV	250	N	Y						

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	NADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
86	85	GUINEA BISSAU	ARCHIPELAGO DOS BIJAGOSA	11.4N 15.9W	12.4N 13.6W	0	LO	250	N	N	19910408	124800	246	157	84	46
86	86	GUINEA BISSAU	CANAL DO GEBIA	11.8N 15.0W	12.3N 13.4W	0	LO	250	N	N	19910408	124804	246	159	84	46
86	76	GUINEA BISSAU	CASAMANCE R, RIO CACHEU	12.3N 16.1W	13.7N 14.3W	0	LO	250	U	Y	19910409	120841	246	115	76	61
88	77	GUINEA BISSAU	GEBIA CANAL, DOS BIJAGOS I	11.6N 15.6W	13.6N 14.2W	0	LO	250	U	Y	19910409	120843	246	115	76	61
88	78	GUINEA BISSAU	R. GRANDE, DOS BIJAGOS IS	11.1N 15.4W	13.5N 14.0W	15	LO	250	U	N	19910409	120847	246	115	76	61
88	79	GUINEA BISSAU	RIO CASSINE, COAST	11.0N 15.1W	13.5N 13.9W	15	LO	250	U	Y	19910409	120849	246	115	76	61
88	87	GUINEA BISSAU	RIO CORUBAL, AGR, DARK	11.8N 14.2W	12.5N 12.0W	0	LO	250	U	N	19910409	120923	246	115	76	61
153	OCJ	GUINEA BISSAU	GEBIA, CASAMANCE RIVERS	12.5N 14.5W		0	LO	250	N	Y						
12	7	GULF OF ADEN	STRAIT OF MANDEB	12.0N 46.0E	18.6N 48.7E	10	HO	35	O	N	19910410	064659	247	106	59	73
12	13	GULF OF ADEN	HORN OF AFRICA, SOCOTRA	12.0N 51.0E	16.6N 53.3E	10	HO	35	O	N	19910410	064819	247	107	64	73
14	31	GULF OF ADEN	AFAR REGION, RIFT VALLEY	13.0N 46.0E	11.5N 39.7E	15	HO	35	N	N	19910410	082452	247	103	75	74
96	103	GULF OF ADEN	VALE OF TEARS ST. AFAR	11.5N 42.5E		15	HO	100	N	N						
97	92	GULF OF ADEN	PANORAMA		8.2N 38.2E	40	HO	250	N	N	19910406	110015	243	266	67	14
74	27	GULF OF MEXICO	VRY HAZY		28.5N 95.4W	60	HO	250	N	N	19910409	132658	245	89	14	62
74	28	GULF OF MEXICO			28.5N 94.6W	90	HO	250	N	N	19910409	132709	245	89	14	62
78	26	GULF OF MEXICO	ALACRAN REEF	22.5N 89.5W	5.1N 42.9W	0	LO	250	N	N	19910409	150830	245	105	48	63
92	91	GULF OF MEXICO	CLDY, SOME LAND		28.1N 88.0W	95	LO	250	N	N	19910407	130713	246	92	19	31
92	92	GULF OF MEXICO	CLDY, SOME LAND		28.1N 87.1W	95	LO	250	N	N	19910407	130725	246	93	20	31
92	93	GULF OF MEXICO	CLDY, SHIP WAKE		28.3N 85.1W	70	LO	250	N	N	19910407	130755	246	94	21	31
92	94	GULF OF MEXICO	CLDY, CLOUD WAVES		28.3N 83.7W	99	LO	250	N	N	19910407	130815	246	94	23	31
38	24	GULF OF OMAN	SHIP WAKES	24.0N 60.0E	25.3N 53.8E	60	LO	35	N	N	19910411	043006	245	96	31	87
38	29	GULF OF OMAN	STRAIT OF HORMUZ	25.0N 57.0E	23.8N 59.4E	55	LO	35	N	N	19910411	043135	246	98	37	87
91	36	GULF OF PANAMA	CLOUDS		6.0N 79.2W	90	LO	250	N	N	19910405	192704	243	271	58	4
151	143	GULF OF THAILAND	SOUTH TIP VIETNAM, SUNGLI	9.0N 104.0E	10.2N 106.0E	20	LO	250	N	Y	19910406	061845	244	260	69	11
16	29	GUYANA	ESSEQUIBO RIVER MOUTH	7.0N 58.0W	2.1N 62.9W	70	HO	35	N	N	19910410	161731	248	350	84	79
75	98	GUYANA	COAST, BOR. SURINAM	7.0N 56.5W	8.5N 57.9W	60	LO	250	N	N	19910406	171347	244	265	70	18
79	28	GUYANA	WAINI RIVER MOUTH	8.5N 60.0W	10.4N 61.4W	60	LO	250	N	N	19910406	171242	244	256	73	18
79	29	GUYANA	ESSEQUIBO RIVER MOUTH	7.0N 58.5W	9.3N 59.4W	65	LO	250	N	N	19910406	171319	244	261	71	18
79	30	GUYANA	COASTAL REG., SED. PLUME	7.0N 58.0W	8.9N 58.6W	60	LO	250	N	N	19910406	171335	244	263	70	18
79	31	GUYANA	BERBICE RIVER MOUTH	6.5N 57.5W	8.3N 57.4W	35	LO	250	N	N	19910406	171356	244	265	69	18
90	107	GUYANA	ESSEQUIBO R/D DELTA	7.0N 58.5W	9.3N 59.4W	75	LO	250	N	N	19910406	171319	244	262	71	18
90	110	GUYANA	BERBICE R, NEW AMSTERDAM	6.5N 57.5W	8.3N 57.6W	40	LO	250	U	N	19910406	171354	244	265	69	18
72	18	HAITI	DU SUC CHANNEL	18.5N 73.5W	16.4N 75.5W	35	LO	100	N	N	19910405	174728	244	225	75	3
74	34	HAITI	NORTHERN PENINSULA	19.7N 73.0W	4.9N 19.1W	30	LO	250	N	N	19910409	133407	245	103	41	62
74	35	HAITI	OBLIQUE VIEW OF HAITI	19.3N 72.2W	5.0N 19.2W	30	LO	250	N	N	19910409	133411	245	103	41	62
76	13	HAITI	MASSIF DU SUD	18.3N 74.0W	6.7N 47.3W	60	LO	250	N	N	19910409	151300	244	111	65	63
76	14	HAITI	MASSIF DU SUD	18.3N 73.3W	6.7N 47.4W	60	LO	250	N	N	19910409	151303	244	111	65	63
76	15	HAITI	PORT AU PRINCE AREA	18.3N 72.3W	6.8N 47.5W	30	LO	250	N	N	19910409	151305	244	111	65	63
76	16	HAITI	PORT AU PRINCE AREA	18.3N 72.0W	6.8N 47.5W	30	LO	250	N	N	19910409	151307	244	111	66	63
76	17	HAITI	PORT AU PRINCE AREA	18.7N 72.8W	6.8N 47.6W	30	LO	250	N	N	19910409	151310	244	111	66	63

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		MADIR		CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN	EL	OR
				LAT	LONG	LAT	LONG												
76	18	HAITI	PORT AU PRINCE AREA	19.0N	72.3W	6.9N	47.7W	20	LO	250	N	N	19910409	151313	244	111	66	63	
76	24	HAITI	NORTH CENTRAL AREA	19.2N	72.1W	7.1N	48.3W	20	LO	250	N	N	19910409	151332	244	112	67	63	
76	25	HAITI	NORTHWEST AREA	19.5N	72.5W	7.2N	48.5W	20	LO	250	N	N	19910409	151337	244	112	68	63	
76	26	HAITI	NORTHWEST AREA	19.3N	72.2W	7.3N	48.6W	20	LO	250	N	N	19910409	151340	244	112	68	63	
76	27	HAITI	NORTHEAST AREA	19.3N	71.9W	7.3N	48.7W	30	LO	250	N	N	19910409	151343	244	112	68	63	
78	38	HAITI	GONAVE IS., CAPE ST MARC	19.0N	73.0W	6.2N	46.3W	15	NV	250	N	Y	19910409	151228	244	111	63	63	
78	39	HAITI	GULF OF GONAVE	19.5N	73.0W	6.3N	46.4W	10	LO	250	N	Y	19910409	151231	244	111	63	63	
78	40	HAITI	TORTURE IS. CAPE MOLE	20.0N	73.0W	6.3N	46.5W	5	LO	250	N	Y	19910409	151234	244	111	64	63	
78	41	HAITI	TORTURE IS. CAPE HAITIEN	20.0N	72.5W	6.4N	46.7W	10	LO	250	N	Y	19910409	151240	244	111	64	63	
78	42	HAITI	MANZANILLO BAY	20.0N	72.0W	6.4N	46.8W	20	LO	250	N	Y	19910409	151243	244	111	64	63	
87	70	HAITI	TORTUE I., NORTH SIDE	19.4N	72.8W	4.7N	18.4W	40	LO	250	U	Y	19910409	133344	245	103	43	62	
72	38	HONDURAS	COAST-FONSECA GULF	13.0N	87.5W	18.2N	103.4W	45	LO	100	N	Y	19910405	191945	244	204	76	4	
81	14	HONDURAS	GULF OF FONSECA	13.0N	87.5W	11.3N	88.9W	5	NV	250	N	N	19910405	192402	243	257	68	4	
151	14	HONDURAS	GULF OF FONSECA	13.0N	87.5W	11.6N	89.4W	20	LO	250	N	Y	19910405	192353	243	256	68	4	
72	98	INDIA	MANGALORE-SUNGLINT	13.0N	74.5E	13.6N	75.7E	10	NV	100	N	Y	19910406	075013	244	240	75	12	
72	99	INDIA	BHADRA RESERVOIR	13.5N	75.5E	13.3N	76.2E	15	NV	100	N	Y	19910406	075023	244	242	75	12	
72	100	INDIA	KRISHNARAJA SAGARA	12.5N	77.0E	12.9N	77.1E	45	NV	100	N	N	19910406	075038	244	245	74	12	
72	101	INDIA	PALAR RIVER	13.5N	79.0E	12.1N	78.6E	40	LO	100	N	Y	19910406	075106	244	250	73	12	
72	102	INDIA	PALAR RIVER	12.5N	79.5E	11.7N	79.4E	40	NV	100	N	Y	19910406	075121	244	252	72	12	
72	103	INDIA	COAST-SUNGLINT-PALAR R.	11.5N	80.5E	10.9N	81.0E	25	NV	100	N	Y	19910406	075149	244	256	71	12	
93	26	INDIA	CLOUDS, VERY DARK			21.2N	69.8E	75	LO	250	U	N	19910406	011008	245	83	-0	8	
93	27	INDIA	CLOUDS, VERY DARK			21.4N	70.4E	75	LO	250	U	N	19910406	011018	245	83	-0	8	
95	13	INDIA	SO. COAST, GULF OF MANNAR	9.1N	79.5E	1.8N	73.1E	20	HO	250	N	N	19910406	093018	243	278	54	13	
151	98	INDIA	GULF OF KUTCH	22.0N	69.0E	28.2N	72.4E	20	HO	250	N	N	19910406	042942	246	111	45	10	
151	99	INDIA	PANJAL RANGE, RAVI R.	32.5N	76.0E	27.8N	76.7E	15	LO	250	N	Y	19910406	043045	246	115	49	10	
151	100	INDIA	GREAT HIMALAYA RANGE	29.0N	80.0E	27.6N	79.0E	20	LO	250	N	Y	19910406	043119	246	117	51	10	
151	101	INDIA	RAPTI R.-GREAT HIMALAYA	27.5N	82.5E	27.1N	82.0E	30	NV	250	N	N	19910406	043204	246	119	54	10	
151	132	INDIA	KUTCH PENINSULA	23.0N	69.5E	24.4N	71.5E	30	LO	250	N	N	19910406	060854	246	135	65	11	
151	133	INDIA	UKAL RESERVOIR-WARMADA R	21.5N	74.0E	23.0N	76.3E	35	LO	250	N	N	19910406	061010	245	143	69	11	
151	134	INDIA	PENNER RIVER-KRISHNA DEL	14.0N	79.0E	20.4N	84.0E	30	HO	250	N	N	19910406	061216	245	165	75	11	
151	135	INDIA	MAHANADI RIVER	20.5N	85.5E	19.4N	86.6E	60	LO	250	N	N	19910406	061300	245	176	76	11	
152	103	INDIA	GULF OF KUTCH	23.0N	70.0E	25.5N	68.7E	50	LO	250	N	N	19910407	052913	246	118	55	26	
152	104	INDIA	GULF OF KHAMBHAT	22.0N	72.5E	25.1N	70.5E	20	LO	250	N	Y	19910407	052941	246	120	57	26	
152	105	INDIA	GULF OF KHAMBHAT	22.0N	73.0E	24.3N	73.7E	15	LO	250	N	Y	19910407	053032	246	123	60	26	
152	106	INDIA	WARMADA R.-RESERVOIR	22.5N	78.0E	23.7N	75.7E	5	LO	250	N	Y	19910407	053103	246	125	62	26	
152	107	INDIA	WAINGANG R., RESERVOIRS	21.0N	80.5E	22.7N	79.1E	5	LO	250	N	N	19910407	053157	246	129	65	26	
152	108	INDIA	HIRAKUD RES.-MAHANADI R.	21.0N	83.5E	21.7N	82.1E	5	NV	250	N	N	19910407	053246	246	133	68	26	
152	109	INDIA	MAHANADI R.-COAST	20.5N	85.0E	21.0N	84.1E	15	NV	250	N	Y	19910407	053319	246	136	70	26	
152	110	INDIA	MAHANADI R.DELTA-COAST	20.0N	87.0E	20.2N	86.4E	50	NV	250	N	Y	19910407	053358	245	140	72	26	
152	196	INDIA	COAST-KALINADI RIVER	15.0N	75.0E	14.8N	75.1E	5	NV	250	N	Y	19910407	071100	245	194	81	27	

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	NADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL	OR
152	197	INDIA	TUNGHADRA R.-DECCAN P.	14.5N 75.5E	14.5N 75.0E	15	NV	250	N	Y	19910407	071110	245	199	81	27
152	198	INDIA	TUNGHADRA R.-DECCAN P.	14.5N 76.0E	14.3N 76.1E	20	NV	250	N	Y	19910407	071118	245	202	81	27
152	199	INDIA	VENDAVATI R.-DECCAN PLAT	14.0N 76.5E	14.1N 76.6E	20	NV	250	N	Y	19910407	071128	245	207	81	27
152	200	INDIA	RIVER-DECCAN PLAT	14.0N 77.0E	13.8N 77.1E	20	NV	250	N	Y	19910407	071137	245	211	81	27
152	201	INDIA	BANGALORE	13.5N 77.5E	13.6N 77.6E	20	NV	250	N	Y	19910407	071145	245	215	81	27
152	202	INDIA	BANGALORE	13.5N 78.0E	13.4N 78.0E	20	NV	250	N	Y	19910407	071153	245	218	81	27
152	203	INDIA	PALAR R.-EASTERN GHATS	13.0N 78.5E	13.1N 78.5E	20	NV	250	N	Y	19910407	071202	245	222	81	27
152	204	INDIA	PALAR R.-EASTERN GHATS	13.0N 79.0E	12.8N 79.2E	20	NV	250	N	Y	19910407	071214	245	227	81	27
152	205	INDIA	PALAR R.-COAST	12.5N 79.5E	12.5N 79.8E	35	NV	250	N	Y	19910407	071225	244	231	80	27
152	206	INDIA	PALAR R.-COAST	14.5N 80.5E	11.8N 81.5E	35	LO	250	N	Y	19910407	071256	244	241	79	27
152	283	INDIA	BRAMHAPUTRA R.-DOUBLE EX	28.4N 95.7E	28.4N 95.7E	45	LO	250	N	N	19910408	013817	248	98	29	39
15	30	INDIAN OCEAN	LINEAR CLOUD FORMATION	26.4S 49.3E	26.4S 49.3E	85	HO	35	N	N	19910410	132926	245	286	13	77
15	31	INDIAN OCEAN	LINEAR CLOUD FORMATION	26.8S 51.4E	26.8S 51.4E	90	HO	35	N	N	19910410	132957	245	285	11	77
15	32	INDIAN OCEAN	THUNDERSTORM	28.3S 64.0E	28.3S 64.0E	75	LO	35	N	N	19910410	133304	244	278	-1	77
77	55	INDIAN OCEAN	AREA NW. OF MADAGASCAR	9.1S 44.5E	9.1S 44.5E	20	LO	250	N	N	19910406	124314	242	283	33	15
77	56	INDIAN OCEAN	SEYCHELLES	47.6E 10.7S	47.5E	40	LO	250	N	N	19910406	124409	242	283	29	15
94	64	INDIAN OCEAN	PALK ST., G. OF MANNAR	8.0N 80.0E		30	HO	100	N	N						
94	103	INDIAN OCEAN	SUNGLINT, COLLAPSED TS			35	LO	100	U	N						
94	104	INDIAN OCEAN	SUNGLINT, COLLAPSED TS			35	LO	100	U	N						
97	98	INDIAN OCEAN	PANORAMA	0.8N 51.1E	0.8N 51.1E	50	HO	250	N	N	19910406	110419	243	279	53	14
97	99	INDIAN OCEAN	CLOUD PATTERNS	0.1N 52.2E	0.1N 52.2E	60	HO	250	N	N	19910406	110441	243	280	51	14
97	100	INDIAN OCEAN	CLOUD PATTERNS	2.5S 56.7E	2.5S 56.7E	50	HO	250	N	N	19910406	110606	243	281	46	14
98	11	INDIAN OCEAN	SUNGLINT, WAVE PATTERNS	12.7N 55.5E	12.7N 55.5E	10	LO	250	N	N	19910407	084543	245	227	81	28
98	12	INDIAN OCEAN	SUNGLINT, WAVE PATTERNS	10.8N 59.1E	10.8N 59.1E	40	LO	250	N	N	19910407	084649	244	248	79	28
98	13	INDIAN OCEAN	SUNGLINT, WAVE PATTERNS	10.6N 59.5E	10.6N 59.5E	40	LO	250	N	N	19910407	084657	244	250	78	28
41	17	INDONESIA	EASTERN END OF JAVA	10.0S 115.0E	15.8S 114.6E	55	HO	35	N	N	19910411	082900	248	305	51	88
41	18	INDONESIA	EASTERN END OF JAVA	10.0S 116.0E	16.4S 115.9E	60	HO	35	N	N	19910411	082923	248	304	49	88
92	50	INDONESIA	W.END SUMATRA, S.COAST	4.0N 96.5E	4.4N 94.4E	70	LO	250	N	N	19910407	071659	244	276	66	27
92	51	INDONESIA	W.END SUMATRA, S.COAST	4.4N 96.0E	4.4N 94.6E	60	LO	250	N	N	19910407	071702	244	276	66	27
92	52	INDONESIA	W.END SUMATRA, S.COAST	4.6N 95.8E	4.3N 94.8E	60	LO	250	N	N	19910407	071705	244	276	66	27
92	53	INDONESIA	W.END SUMATRA, N.COAST	5.0N 95.7E	4.0N 95.2E	80	LO	250	N	N	19910407	071714	244	277	65	27
92	54	INDONESIA	SUMATRA, LAKE DANAU TOBA	2.8N 98.7E	3.6N 95.9E	90	LO	250	N	N	19910407	071726	244	278	65	27
92	55	INDONESIA	SUMATRA, PASAR SINGKIL	2.5N 98.0E	3.5N 96.0E	70	LO	250	N	N	19910407	071729	244	278	65	27
92	56	INDONESIA	ISLAND OF PULAU NIAS	1.0N 97.6E	3.4N 96.2E	30	LO	250	N	N	19910407	071733	244	278	64	27
92	57	INDONESIA	KUANTAN RIVER, DELTA AREA	0.6S 102.5E	0.4S 102.8E	80	LO	250	N	N	19910407	071938	243	283	57	27
92	58	INDONESIA	KUANTAN RIVER, DELTA AREA	0.4S 103.1E	0.7S 103.2E	90	LO	250	N	N	19910407	071947	243	283	56	27
92	59	INDONESIA	HARI RIVER, DELTA AREA	1.1S 103.7E	0.9S 103.6E	70	LO	250	N	N	19910407	071955	243	283	56	27
92	60	INDONESIA	HARI RIVER, DELTA AREA	1.5S 104.0E	1.2S 104.1E	60	LO	250	N	N	19910407	072003	243	283	55	27
92	61	INDONESIA	AIR TJALAK RIVER AREA	2.0S 104.6E	1.4S 104.4E	60	LO	250	N	N	19910407	072010	243	283	55	27
92	62	INDONESIA	PALEMBANG AREA	3.0S 104.5E	2.2S 105.8E	80	LO	250	N	N	19910407	072037	243	284	53	27

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	CENTER LON	NADIR LAT	NADIR LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
92	63	INDONESIA	H20 DETAIL, SELAT BANGKA	2.5S 105.7E	2.4S 106.3E	30 LO 250 N	19910407	072045	243	284	53	27						
92	64	INDONESIA	PULAU BANGKA, S. TIP	3.1S 106.7E	3.1S 107.4E	60 LO 250 N	19910407	072107	243	284	51	27						
151	149	INDONESIA	BORNEO-SESAPAP RIVER	3.5N 117.0E	4.1N 116.9E	40 NV 250 N	19910406	062210	243	275	58	11						
151	150	INDONESIA	BORNEO-BERAU RIVER	2.0N 118.0E	3.7N 117.6E	40 LO 250 N	19910406	062223	243	275	57	11						
151	151	INDONESIA	BORNEO-STIBUKO BAY	4.0N 118.5E	3.2N 118.6E	40 NV 250 N	19910406	062241	243	276	56	11						
151	152	INDONESIA	BORNEO-MAHAKAM RIVER DEL	0.5N 118.0E	2.5N 119.8E	45 LO 250 N	19910406	062305	243	277	55	11						
151	153	INDONESIA	SULAWESI-DONDO BAY	1.0N 120.5E	2.1N 120.5E	30 LO 250 N	19910406	062318	243	277	54	11						
151	154	INDONESIA	SULAWESI	1.0N 121.5E	1.9N 120.9E	25 NV 250 N	19910406	062325	243	278	53	11						
151	155	INDONESIA	UNALUA ISLAND, SULAWESI	0.0 121.0E	1.8N 121.3E	25 LO 250 N	19910406	062333	243	278	53	11						
151	156	INDONESIA	UNALUA ISLAND, SUNGLINT	0.0 121.0E	0.1N 123.8E	20 LO 250 N	19910406	062422	243	279	50	11						
151	157	INDONESIA	SULA ISLANDS	2.0S 126.0E	0.9S 125.5E	35 LO 250 N	19910406	062454	243	280	48	11						
151	158	INDONESIA	NEW GUINEA, RIVER DELTA	5.5S 138.0E	6.8S 135.8E	50 LO 250 N	19910406	062810	242	282	36	11						
151	161	INDONESIA	SUMBA-CLOUDS	10.5S 120.5E	11.6S 120.8E	30 LO 250 N	19910406	080421	242	283	26	12						
151	162	INDONESIA	SAMU ISLAND-CLOUDS	11.0S 121.5E	12.0S 121.5E	30 LO 250 N	19910406	080434	242	283	25	12						
152	138	INDONESIA	BORNEO-STIBUKO BAY-SUNGLT	4.0N 118.0E	3.8N 119.5E	40 LO 250 N	19910407	054355	244	277	65	26						
152	140	INDONESIA	SULAWESI-NORTHERN SHORE	1.5N 122.0E	2.3N 122.0E	25 NV 250 N	19910407	054443	243	279	62	26						
152	141	INDONESIA	SULAWESI-EASTERN END	1.0N 124.5E	1.7N 123.0E	25 NV 250 N	19910407	054503	243	280	61	26						
152	142	INDONESIA	SULAWESI-EAST END-SUNGLT	0.5N 124.5E	0.3S 126.4E	25 LO 250 N	19910407	054608	243	282	57	26						
152	143	INDONESIA	SERAM-SED PLUMES-STORMS	3.0S 130.0E	2.3S 129.8E	30 NV 250 N	19910407	054713	243	284	52	26						
152	144	INDONESIA	SERAM-SED PLUMES-STORMS	3.0S 130.0E	2.7S 130.6E	30 NV 250 N	19910407	054727	243	284	52	26						
152	145	INDONESIA	BINTUNI BAY	2.5S 133.5E	3.7S 132.3E	50 LO 250 N	19910407	054801	243	284	50	26						
152	146	INDONESIA	SAREBA BAY	3.5S 135.5E	4.4S 133.4E	55 LO 250 N	19910407	054822	243	285	48	26						
152	147	INDONESIA	COAST-ARAFURA SEA-DELTA	7.1S 138.2E	7.1S 138.2E	90 LO 250 N	19910407	054952	243	285	43	26						
152	148	INDONESIA	COAST-PAPUA N. GUINEA BOR	8.5S 140.5E	7.6S 139.2E	75 LO 250 N	19910407	055011	243	286	41	26						
152	208	INDONESIA	SUMATERA-LHOKSEUMAWA	5.5N 96.5E	2.7N 97.5E	80 LO 250 N	19910407	071757	244	279	63	27						
152	209	INDONESIA	SUMATERA-NE COAST	5.0N 98.0E	2.6N 97.7E	50 LO 250 N	19910407	071801	244	279	63	27						
152	210	INDONESIA	SUMATERA-NE COAST	4.5N 98.5E	2.4N 97.9E	60 LO 250 N	19910407	071805	243	279	62	27						
152	211	INDONESIA	SUMATERA-WEIH RIVER	4.0N 98.0E	2.3N 98.2E	80 LO 250 N	19910407	071810	243	280	62	27						
152	212	INDONESIA	SUMATERA-LAKE TOBA	3.0N 98.0E	2.2N 98.3E	75 NV 250 N	19910407	071813	243	280	62	27						
152	213	INDONESIA	SUMATERA-LAKE TOBA	3.0N 99.0E	2.0N 98.6E	75 NV 250 N	19910407	071819	243	280	62	27						
152	214	INDONESIA	SUMATERA-LAKE TOBA	2.0N 98.5E	1.8N 99.0E	65 NV 250 N	19910407	071825	243	280	61	27						
152	215	INDONESIA	NIAS ISLAND-SUNGLINT	1.5N 98.0E	1.7N 99.2E	10 LO 250 N	19910407	071830	243	280	61	27						
152	216	INDONESIA	TUANGKU, BANGKARU IS.	2.5N 97.5E	1.5N 99.5E	50 LO 250 N	19910407	071835	243	281	61	27						
152	217	INDONESIA	SUMATERA-MUSALA I-SUNGLT	2.0N 99.0E	1.4N 99.7E	50 NV 250 N	19910407	071840	243	281	60	27						
152	218	INDONESIA	SUMATERA-RIVER EFFLUENT	2.5N 101.0E	1.1N 100.3E	50 LO 250 N	19910407	071850	243	281	60	27						
152	219	INDONESIA	SUMATERA-RUPAT ISLAND	2.0N 101.5E	0.8N 100.7E	50 LO 250 N	19910407	071858	243	281	59	27						
152	220	INDONESIA	SUMATERA-INTERIOR-CLOUDS	0.5N 100.0E	0.5N 101.2E	70 LO 250 N	19910407	071908	243	282	59	27						
152	223	INDONESIA	SUMATERA-SE PART-SED PLU	0.0 103.5E	0.5S 102.9E	50 NV 250 N	19910407	071941	243	283	57	27						
152	224	INDONESIA	SUMATERA-HARI R. SED PLUM	1.0S 104.0E	0.8S 103.4E	45 NV 250 N	19910407	071951	243	283	56	27						
152	225	INDONESIA	SUMATERA-BANGKA ISLAND	2.0S 105.0E	1.1S 103.9E	50 LO 250 N	19910407	072000	243	283	55	27						

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		MADIR		CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
				LAT	LONG	LAT	LONG											
152	226	INDONESIA	BANGKA ISLAND-N. PART	1.5S	105.5E	1.3S	104.4E	40	NV	250	N	Y	19910407	072009	243	283	65	27
152	227	INDONESIA	SUMATERA-BANGKA I.	2.0S	105.0E	1.7S	105.0E	55	NV	250	N	Y	19910407	072020	243	283	54	27
152	228	INDONESIA	BANGKA I.-SOUTHERN PART	2.5S	106.5E	2.0S	105.4E	50	NV	250	N	Y	19910407	072028	243	284	54	27
152	229	INDONESIA	BANGKA I.-SOUTHERN PART	3.0S	106.0E	2.3S	106.0E	50	NV	250	N	Y	19910407	072040	243	284	53	27
152	230	INDONESIA	BORNEO-CAPE PUTING	2.5S	112.0E	4.6S	110.0E	80	LO	250	N	N	19910407	072157	243	285	48	27
152	231	INDONESIA	BORNEO-LAUT ISLAND	4.0S	118.0E	6.6S	113.5E	40	LO	250	N	N	19910407	072303	243	286	44	27
153	189	INDONESIA	SULAWESI, BANGKA STRAIT	2.5N	124.0E	3.8N	125.2E	25	LO	250	N	N	19910410	034849	247	332	85	71
153	191	INDONESIA	HALMAHERA, KAU BAY	1.5N	127.5E			30	LO	250	U	N						
153	193	INDONESIA	W. N. GUINEA, MACCLURE G	2.0S	132.5E			50	LO	250	U	N						
38	22	IRAN	ZAGROS MTS., BAKHTEGAN L	30.0N	54.0E	25.6N	52.3E	5	LO	35	N	N	19910411	042944	245	95	30	87
38	23	IRAN	ZAGROS MTS.	28.0N	54.0E	25.5N	53.0E	30	LO	35	N	N	19910411	042954	245	96	31	87
38	28	IRAN	S. ZAGROS MNTS.	26.0N	58.0E	24.3N	57.7E	35	LO	35	N	N	19910411	043107	245	97	35	87
151	96	IRAN	ZAGROS MNTS., QESHM	28.0N	56.0E	28.2N	55.7E	20	NV	250	N	N	19910406	042538	246	99	30	10
151	130	IRAN	QESHM-SUNGLINT	27.0N	55.0E	27.7N	53.9E	5	NV	250	N	Y	19910406	060426	246	115	49	11
152	95	IRAN	TIGRIS R. DELTA-OIL FIRE	30.1N	48.8E	28.2N	51.3E	0	LO	250	N	Y	19910407	052453	246	105	39	26
152	96	IRAN	ZAGROS MOUNTAINS	28.0N	52.0E	28.0N	52.9E	0	LO	250	N	N	19910407	052517	246	106	41	26
152	97	IRAN	ZAGROS MNTS.-SALT PANS	30.5N	54.5E	27.9N	54.0E	0	LO	250	N	N	19910407	052533	246	107	42	26
152	98	IRAN	COAST-HORMOZ I.-LAKAR I.	27.0N	57.0E	27.6N	56.7E	10	NV	250	N	N	19910407	052612	246	109	44	26
152	100	IRAN	IRAN-PAKISTAN BOR.-MNTS.	28.0N	62.0E	27.2N	59.8E	5	LO	250	N	N	19910407	052658	246	111	47	26
38	7	IRAQ	BAGHDAD REGION	33.0N	43.0E	27.6N	40.9E	40	HO	35	N	N	19910411	042651	244	91	19	87
38	8	IRAQ	BASRA REG., KUWAIT FIRES	31.0N	47.0E	27.6N	41.5E	10	HO	35	N	N	19910411	042700	244	91	20	87
73	44	IRAQ	BAGHDAD	33.4N	43.8E	25.5N	44.9E	0	LO	250	N	N	19910407	070240	246	117	55	27
73	45	IRAQ	SO. OF BAGHDAD	32.0N	45.6E	25.4N	45.5E	0	LO	250	N	N	19910407	070250	246	118	56	27
73	46	IRAQ	BASRAH AREA	30.5N	47.8E	25.1N	46.7E	0	LO	250	N	N	19910407	070308	246	119	57	27
152	90	IRAQ	TIGRIS R.-HAMMAR MARSH	31.0N	47.5E	28.4N	46.6E	0	LO	250	N	Y	19910407	052345	246	102	35	26
152	92	IRAQ	ZUBAY R.-KUWAIT FIRES	30.0N	48.0E	28.3N	48.7E	0	LO	250	N	Y	19910407	052415	246	104	37	26
152	94	IRAQ	IRAQ-IRAN BOR.-OIL FIRES	30.5N	48.3E	28.2N	50.8E	0	LO	250	N	Y	19910407	052445	246	105	39	26
152	179	IRAQ	EUPHRATES RIVER-BAGHDAD	35.0N	42.5E	26.4N	40.6E	20	HO	250	N	N	19910407	070135	246	114	51	27
152	188	IRAQ	LOOKING TOWARD PERSIAN G			24.4N	49.5E	30	HO	250	N	N	19910407	070352	246	122	60	27
94	73	ISRAEL	SINAI PEN., DEAD SEA RIFT	31.0N	35.5E			0	HO	100	N	N						
124	124	ISRAEL	DEAD SEA	31.0N	35.0E	28.4N	35.4E	10	LO	250	N	Y	19910406	055956	246	101	33	11
151	124	A ISRAEL	DEAD SEA	30.0N	35.0E	28.5N	36.3E	10	LO	250	N	Y	19910406	060010	246	102	34	11
152	258	ISRAEL	NEAR COAST-DOUBLE EXPOS			21.9N	33.8E	40	LO	250	N	N	19910407	083930	246	130	67	28
80	4	IVORY COAST	LAND USE	10.0N	7.0W	9.9N	7.0W	0	NV	250	N	N	19910409	121055	246	117	84	61
80	5	IVORY COAST	NEAR CITY OF BOUNDIALI	10.0N	7.0W	9.9N	6.9W	0	NV	250	N	Y	19910409	121057	246	117	84	61
80	6	IVORY COAST	NEAR CITY OF BOUNDIALI	9.5N	6.5W	9.8N	6.7W	0	NV	250	N	Y	19910409	121100	246	117	85	61
80	7	IVORY COAST	NEAR CITY OF BOUNDIALI	9.5N	6.5W	9.7N	6.6W	0	NV	250	N	Y	19910409	121102	246	117	85	61
80	8	IVORY COAST	LAND USE PATTERNS			9.6N	6.5W	0	NV	250	N	N	19910409	121105	246	117	85	61
80	9	IVORY COAST	LAND USE PATTERNS	9.5N	6.5W	9.6N	6.4W	NV	250	N	Y	19910409	121107	246	117	85	61	
80	10	IVORY COAST	LAND USE PATTERNS	9.5N	6.5W	9.5N	6.1W	0	NV	250	N	Y	19910409	121111	246	117	85	61

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	NADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
80	11	IVORY COAST	LAND USE PATTERNS	9.0N 6.5W	9.4N 6.0W	0	NV	250	N	Y	19910409	121113	246	117	85	61
80	12	IVORY COAST	BANDAMA BLANC RIVER	9.0N 6.5W	9.3N 5.8W	5	NV	250	N	Y	19910409	121117	246	117	86	61
80	13	IVORY COAST	BANDAMA BLANC RIVER	8.5N 5.5W	9.2N 5.7W	10	NV	250	N	Y	19910409	121119	246	117	86	61
80	14	IVORY COAST	LAND USE PATTERNS		9.1N 5.6W	5	NV	250	N	Y	19910409	121122	246	117	86	61
80	15	IVORY COAST	LAND USE PATTERNS		9.1N 5.4W	5	NV	250	N	Y	19910409	121124	246	117	86	61
80	16	IVORY COAST	LAND USE PATTERNS		9.0N 5.3W	15	NV	250	N	Y	19910409	121126	246	117	86	61
80	17	IVORY COAST	BANDAMA BLANC RIVER	8.5N 5.5W	8.9N 5.2W	10	NV	250	N	Y	19910409	121129	246	117	86	61
80	18	IVORY COAST	BANDAMA BLANC RIVER	8.5N 5.0W	8.8N 5.0W	20	NV	250	N	Y	19910409	121132	246	117	87	61
80	19	IVORY COAST	EAST OF KOSSOU RESERVOIR	8.0N 5.0W	8.8N 4.9W	30	NV	250	N	Y	19910409	121135	246	117	87	61
80	20	IVORY COAST	NE OF KOSSOU RESERVOIR	8.0N 5.0W	8.7N 4.7W	40	NV	250	N	Y	19910409	121138	246	117	87	61
80	21	IVORY COAST	KOSSOU RESERVOIR	7.5N 5.5W	8.4N 4.2W	65	NV	250	N	Y	19910409	121148	246	117	88	61
80	22	IVORY COAST	NEAR KOSSOU RESERVOIR		8.1N 3.6W	60	NV	250	N	Y	19910409	121158	246	118	88	61
80	23	IVORY COAST	WEST OF KOMOE RIVER	8.0N 4.5W	8.0N 3.5W	35	NV	250	N	Y	19910409	121201	246	118	88	61
80	24	IVORY COAST	KOMOE RIVER	8.0N 4.0W	7.9N 3.3W	25	NV	250	N	Y	19910409	121204	246	118	89	61
80	25	IVORY COAST	EAST OF KOMOE RIVER	8.0N 3.5W	7.8N 3.2W	10	NV	250	N	Y	19910409	121207	246	118	89	61
80	26	IVORY COAST	EAST OF KOMOE RIVER	8.0N 3.0W	7.7N 3.0W	10	NV	250	N	Y	19910409	121210	246	119	89	61
88	104	IVORY COAST	AGRICULTURE, DARK		9.4N 6.0W	0	LO	250	U	N	19910409	121113	246	117	85	61
88	105	IVORY COAST	AGRICULTURE, DARK		9.3N 5.9W	5	LO	250	U	N	19910409	121115	246	117	85	61
88	106	IVORY COAST	AGRICULTURE, DARK		9.2N 5.8W	5	LO	250	U	N	19910409	121118	246	117	86	61
88	107	IVORY COAST	BANDAMA BLANC R. AGR. DARK	8.8N 5.5W	9.0N 5.3W	25	NV	250	U	Y	19910409	121127	246	117	86	61
88	108	IVORY COAST	AGRICULTURE, DARK		8.7N 4.7W	50	LO	250	U	Y	19910409	121138	246	117	87	61
88	109	IVORY COAST	KOMO R. AGR. DARK	8.5N 4.0W	8.5N 4.5W	20	NV	250	U	Y	19910409	121142	246	117	87	61
88	110	IVORY COAST	KOMO R. AGR. DARK	8.0N 4.0W	8.4N 4.3W	60	NV	250	U	Y	19910409	121146	246	117	87	61
88	111	IVORY COAST	AGR. DARK, CLOUDS		8.0N 3.5W	85	LO	250	U	N	19910409	121200	246	118	88	61
88	112	IVORY COAST	KOMOE R. AGR. V. DARK	7.2N 3.7W	7.6N 2.8W	40	LO	250	U	Y	19910409	121213	246	120	89	61
88	113	IVORY COAST	KOMOE R. AGR. V. DARK	6.9N 3.6W	7.5N 2.7W	50	LO	250	U	Y	19910409	121216	246	123	89	61
88	114	IVORY COAST	AGR. V. DARK, CLOUDS		7.4N 2.5W	85	LO	250	U	Y	19910409	121220	246	284	89	61
90	63	IVORY COAST	KOSSOU RESERVOIR	7.5N 5.5W	6.1N 5.9W	70	LO	250	N	N	19910406	140815	243	271	64	16
71	65	JAMAICA	EASTERN END	18.0N 76.0W	17.0N 76.8W	15	NV	250	N	Y	19910405	174706	244	221	75	3
71	66	JAMAICA	KINGSTON	18.0N 76.5W	16.9N 76.5W	20	LO	250	N	Y	19910405	174710	244	222	75	3
71	67	JAMAICA	KINGSTON	18.0N 77.0W	16.8N 76.3W	25	LO	250	N	Y	19910405	174714	244	223	75	3
71	68	JAMAICA	WESTERN END	18.0N 78.0W	16.7N 76.1W	25	LO	250	N	Y	19910405	174718	244	224	75	3
72	16	JAMAICA	WHOLE ISLAND-CLOUDS	18.0N 77.5W	17.8N 78.6W	30	NV	100	N	N	19910405	174634	244	211	76	3
72	17	JAMAICA	PEDRO CAYS-VERY BRIGHT	17.0N 77.5W	17.4N 77.8W	20	NV	100	N	Y	19910405	174648	244	215	76	3
94	65	JAVA SEA	SULOYS, SUMATERA, BANGKA	4.5S 107.5E		55	LO	100	U	N						
94	66	JAVA SEA	SULOYS, SUMATERA, BANGKA	5.0S 108.0E		50	HO	100	U	N						
94	67	JAVA SEA	CLOUDS, SUMATERA, BANGKA	5.0S 109.0E		60	HO	100	U	N						
94	74	JORDAN	SINAI PEN..DEAD SEA RIFT	31.0N 36.0E		0	HO	100	N	Y						
94	75	JORDAN	SINAI PEN..DEAD SEA RIFT	31.0N 37.0E		0	HO	100	N	Y						
152	82	JORDAN	DEAD SEA	31.0N 35.5E	28.3N 34.0E	0	LO	250	N	N	19910407	052041	246	95	23	26



TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LAT	CENTER LON LON	MADIR LAT LAT	MADIR LON LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
152	173	JORDAN	DEAD SEA RIFT VALLEY	30.5N	35.5E	27.3N	34.9E	0	LO	250	N	Y	19910407	070010	246	110	46	27
152	119	KAMPUCHEA	MNTS. NEAR COAST&CHANG I.	13.5N	102.5E	13.7N	101.2E	80	NV	250	N	Y	19910407	053815	245	216	81	26
152	120	KAMPUCHEA	MNTS.-COAST-CHANG I.	13.0N	102.5E	13.0N	102.7E	70	NV	250	N	Y	19910407	053841	244	226	80	26
152	124	KAMPUCHEA	LAKE SAP	12.5N	104.5E	11.5N	105.5E	65	LO	250	N	Y	19910407	053933	244	243	79	26
152	125	KAMPUCHEA	MEKONG RIVER-CLOUDS	12.5N	106.5E	11.2N	108.1E	90	LO	250	N	Y	19910407	053943	244	246	78	26
13	8	KENYA	LAKE RUDOLPH/TURKANA	3.0N	36.0E	2.7N	31.6E	65	HO	35	N	Y	19910410	100319	248	338	84	75
13	10	KENYA	LAKE NATRON, RIFT VALLEY	2.0S	37.0E	0.5N	35.2E	55	HO	35	N	Y	19910410	100428	248	321	81	75
13	11	KENYA	EASTERN KENYA, L. NATRON	3.0S	38.0E	0.2N	35.8E	55	HO	35	N	Y	19910410	100439	248	319	80	75
13	12	KENYA	FORMOSA BAY, COAST	2.0S	41.0E	1.7S	39.1E	50	HO	35	N	Y	19910410	100542	248	314	76	75
75	26	KENYA	COAST	2.0S	41.0E	5.1S	37.3E	70	LO	250	N	Y	19910406	124058	242	283	41	15
77	35	KENYA	NE LAKE VICTORIA	0.5S	34.0E	0.5S	29.4E	60	LO	250	N	Y	19910406	123827	243	280	51	15
77	38	KENYA	NE.LK.VICTORIA,KAVIRONDO	0.0S	34.0E	1.2S	30.5E	60	LO	250	N	Y	19910406	123849	243	281	49	15
77	39	KENYA	NE.LK.VICTORIA,KAVIRONDO	0.8S	34.1E	1.4S	30.8E	60	LO	250	N	Y	19910406	123855	243	281	49	15
77	53	KENYA	MATONDOI AREA,COAST	2.1S	41.0E	5.5S	37.9E	30	LO	250	N	Y	19910406	124110	242	283	41	15
86	66	KENYA	MOMBASA AREA,GOOD SHOT	4.0S	39.5E	4.3S	39.8E	30	LO	250	N	Y	19910408	112350	245	290	57	45
89	1	KENYA	L.VICTORIA,KAVIRONDO G.	0.2S	34.3E	0.2S	32.7E	25	LO	250	N	Y	19910408	112135	245	288	66	45
89	2	KENYA	L.VICTORIA,SIGULU I.	0.3N	33.5E	0.3S	32.8E	65	LO	250	U	N	19910408	112137	245	288	66	45
89	6	KENYA	L.VICTORIA,KAVIRONDO G.	0.4S	34.4E	0.9S	33.8E	25	LO	250	N	Y	19910408	112156	245	288	65	45
89	10	KENYA	LAKE VICTORIA, CLOUDS	1.0S	34.0E	1.3S	34.6E	85	NV	250	N	Y	19910408	112212	245	289	64	45
89	11	KENYA	L.VICTORIA,MFANGANO I.	0.8S	34.1E	1.4S	34.8E	75	NV	250	N	Y	19910408	112215	245	289	64	45
89	12	KENYA	L.VICTORIA,KAVIRONDO G.	0.3S	34.5E	1.6S	35.0E	40	NV	250	N	Y	19910408	112219	245	289	63	45
89	15	KENYA	AGR. VALLEY, ROAD	1.1S	36.0E	2.4S	36.5E	15	LO	250	N	Y	19910408	112247	245	289	62	45
89	16	KENYA	NGIRO STREAM,L.MAGADI	1.5S	36.1E	2.5S	36.6E	10	LO	250	N	Y	19910408	112249	245	289	61	45
89	22	KENYA	MT.KILIMANJARO,CLD COV.	2.9S	37.7E	3.1S	37.7E	75	NV	250	N	Y	19910408	112310	245	290	60	45
89	32	KENYA	MOMBASA,AFLD.COAST	4.2S	39.7E	4.4S	39.9E	30	NV	250	N	Y	19910408	112353	245	290	57	45
89	33	KENYA	GALANA R, COAST	3.5S	40.0E	4.5S	40.1E	25	NV	250	N	Y	19910408	112356	245	290	57	45
89	34	KENYA	TANA RIVER, CLOUDS	1.7S	39.9E	4.7S	40.5E	85	LO	250	N	Y	19910408	112404	245	290	57	45
89	35	KENYA	FORMOSA BAY, TANA RIVER	2.6S	40.2E	4.8S	40.6E	50	LO	250	N	Y	19910408	112406	245	290	57	45
89	36	KENYA	FORMOSA BAY,PATE I,CST	2.3S	40.7E	5.0S	40.9E	60	LO	250	U	N	19910408	112412	245	290	56	45
152	32	KENYA	COAST-PEMBA ISLAND	4.5S	39.0E	4.8S	36.9E	45	LO	250	N	Y	19910406	124050	242	283	42	15
153	0AV	KENYA	L. VICTORIA, KAVIRONDO G	0.5S	34.0E			30	LO	250	N	Y						
153	0AW	KENYA	E. HALF OF L. VICTORIA	1.0S	34.0E			55	LO	250	N	Y						
153	0BQ	KENYA	AREA S. OF KILIMANJARO	3.5S	38.0E			40	LO	250	N	Y						
153	0BR	KENYA	L. KIKULEIWA, JIPE	3.5S	38.0E			55	LO	250	N	Y						
153	0BU	KENYA	CITY OF MOMBASA	4.0S	39.0E			35	LO	250	N	Y						
73	47	KUWAIT	OIL WELL FIRES	29.1N	48.0E	24.3N	49.7E	0	LO	250	N	N	19910407	070355	246	122	60	27
92	43	KUWAIT	OIL WELL SMOKE PLUMES	29.0N	48.0E	25.5N	45.1E	0	LO	250	N	N	19910407	070244	246	118	55	27
92	44	KUWAIT	OIL WELL SMOKE PLUMES	29.0N	48.0E	25.4N	45.4E	0	LO	250	N	N	19910407	070248	246	118	56	27
92	47	KUWAIT	OIL WELL SMOKE PLUMES	28.8N	47.5E	24.4N	49.2E	0	LO	250	N	N	19910407	070348	246	121	59	27
151	127	KUWAIT	BUBYAN ISLAND	29.5N	48.0E	28.3N	47.6E	90	LO	250	N	N	19910406	060254	246	110	44	11

TABLE 4-4.- STS-37 IIANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	CENTER LON	MADIR LAT	MADIR LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL	OR
152	91	KUWAIT	FAYLAKA I.-KUWAIT FIRES	29.5N	48.5E	28.4N	47.9E	0	LO	250	N	Y	19910407	052403	246	103	36	26
152	184	KUWAIT	KUWAIT OIL WELL FIRES	29.3N	47.5E	25.4N	45.5E	0	LO	250	N	Y	19910407	070250	246	118	56	27
91	110	LAOS	WULIANG SHAN, CLOUDS	22.0N	102.0E	28.5N	113.3E	40	LO	250	N	N	19910406	012109	246	107	40	8
151	103	LAOS	MEKONG RIVER	20.0N	101.5E	22.3N	102.5E	10	LO	250	N	N	19910406	043721	245	150	71	10
74	41	LESSER ANTILLES	ST. MARTIN & ANGUILLA IS.	18.0N	63.0W	6.3N	22.6W	40	LO	250	N	N	19910409	133557	245	106	48	62
74	42	LESSER ANTILLES	ANTIGUA & BARBUDA IS.	17.6N	61.8W	6.3N	22.8W	50	LO	250	N	N	19910409	133601	245	106	48	62
74	43	LESSER ANTILLES	ANTIGUA & BARBUDA IS.	17.5N	62.0W	6.5N	23.2W	40	LO	250	N	N	19910409	133616	245	106	49	62
76	42	LESSER ANTILLES	ST VINCENT	13.2N	61.2W	8.7N	51.8W	30	NV	250	N	N	19910409	151549	244	113	76	63
76	43	LESSER ANTILLES	ST LUCIA	13.7N	60.9W	8.7N	51.8W	40	LO	250	N	N	19910409	151552	244	113	76	63
76	44	LESSER ANTILLES	MARTINIQUE, CLDY OVR ISL.	14.5N	61.0W	8.8N	51.9W	40	LO	250	N	N	19910409	151600	244	113	77	63
76	45	LESSER ANTILLES	ST. CHRISTOPHER, NEVI IS.	17.1N	62.6W	8.8N	52.0W	50	LO	250	N	N	19910409	151606	244	113	77	63
76	46	LESSER ANTILLES	BARBUDA, ANTIQUA IS.	17.1N	61.9W	8.8N	52.1W	50	LO	250	N	N	19910409	151611	244	113	77	63
76	47	LESSER ANTILLES	BARBADOS	13.2N	59.6W	8.9N	52.3W	60	LO	250	N	N	19910409	151635	244	113	79	63
78	51	LESSER ANTILLES	ST CHRISTOPHER, NEVIS IS	17.0N	62.5W	8.5N	51.2W	40	LO	250	N	N	19910409	151519	244	113	74	63
78	52	LESSER ANTILLES	ANTIGUA AND BARBUDA IS.	17.5N	62.0W	8.5N	51.4W	30	LO	250	N	N	19910409	151526	244	113	75	63
79	27	LESSER ANTILLES	GRENADA, CARRIACOU IS.	12.0N	61.5W	11.2N	62.8W	25	LO	250	N	N	19910406	171216	244	252	74	18
87	76	LESSER ANTILLES	ANGUILLA, DARK	18.0N	63.5W	5.0N	19.4W	70	LO	250	U	N	19910409	133415	245	104	45	62
87	77	LESSER ANTILLES	BARBUDA, ANTUGUA, DARK	17.1N	61.8W	6.2N	22.5W	50	LO	250	U	N	19910409	133552	245	107	51	62
87	78	LESSER ANTILLES	ANGUILLA, SAINT MARTIN, DK	18.0N	62.5W	6.3N	22.6W	50	LO	250	U	N	19910409	133557	245	107	52	62
77	80	LIBERIA	HAZY, CLDY, T-STORM	8.5N	10.2W	8.5N	10.2W	80	LO	250	N	N	19910406	140655	243	265	69	16
77	81	LIBERIA	HAZY, CLDY	7.8N	8.9W	7.8N	8.9W	80	LO	250	N	N	19910406	140718	243	267	67	16
77	82	LIBERIA	HAZY, CLDY, COASTLINE	6.4N	6.4W	6.4N	6.4W	80	LO	250	N	N	19910406	140808	243	271	65	16
77	83	LIBERIA	HAZY, CLDY, COASTLINE	6.1N	5.9W	6.1N	5.9W	80	LO	250	N	N	19910406	140816	243	272	84	16
83	43	LIBERIA	NE PANORAMA-COAST, DUST	2.7N	18.0W	2.7N	18.0W	50	HO	100	N	N	19910409	134823	245	299	80	62
90	61	LIBERIA	LAKE PISO, CAPE MOUNT, CST	6.8N	11.5W	7.4N	8.1W	50	LO	250	N	N	19910406	140733	243	268	67	16
90	62	LIBERIA	COAST	5.5N	9.5W	6.8N	7.0W	65	LO	250	N	N	19910406	140754	243	270	65	16
8	5	LIBYA	UBARI & MURZUK SAND SEAS	28.4N	7.0E	28.4N	7.0E	20	LO	35	N	N	19910410	063608	244	90	17	73
8	8	LIBYA	MARZUQ DESERT AREA	26.0N	12.5E	28.2N	10.3E	10	LO	35	N	N	19910410	063657	244	92	21	73
8	9	LIBYA	MARZUQ DESERT AREA	26.2N	13.2E	27.9N	13.1E	5	LO	35	N	N	19910410	063738	245	93	23	73
8	11	LIBYA	EL HARUJ EL ASWAD AREA	27.0N	17.0E	27.4N	16.8E	0	LO	35	N	N	19910410	063832	245	95	27	73
8	13	LIBYA	LIBYAN DESERT	26.8N	21.0E	26.8N	21.0E	0	LO	35	N	N	19910410	063935	245	97	31	73
8	15	LIBYA	LIBYAN DESERT	26.0N	23.0E	26.4N	23.1E	0	LO	35	N	N	19910410	064008	245	98	33	73
8	17	LIBYA	REBIANA SAND SEA	25.8N	26.0E	25.8N	26.0E	5	LO	35	N	N	19910410	064052	245	99	36	73
14	4	LIBYA	MARZUQ D., AS-SABAH HILL	17.0E	24.1N	8.7E	8.7E	5	HO	35	N	N	19910410	081603	246	101	42	74
14	5	LIBYA	MARZUQ D., TIBESTI MTNS.	25.0N	13.0E	23.7N	10.1E	0	HO	35	N	N	19910410	081625	246	102	43	74
14	6	LIBYA	EL HARUJ EL ASWAD PLAT.	26.0N	18.0E	23.1N	12.3E	0	HO	35	N	N	19910410	081700	246	103	45	74
14	7	LIBYA	MARZUQ DESERT	25.0N	13.0E	22.8N	13.2E	0	LO	35	N	N	19910410	081714	246	103	46	74
14	10	LIBYA	REBIANA SAND SEA	24.0N	21.0E	21.5N	17.1E	15	LO	35	N	N	19910410	081818	246	104	50	74
42	27	LIBYA	AREA N. OF TIBESTI MTNS.	24.0N	16.0E	23.6N	12.4E	0	LO	35	N	N	19910411	073845	246	98	37	89
42	28	LIBYA	TIBESTI MTS., UAUEN NAMUS	24.0N	18.0E	23.3N	13.3E	15	HO	35	N	N	19910411	073859	246	98	38	89

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	NADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
42	29	LIBYA	TIBESTI MTS., UAUEN NAMUS	25.0N 18.0E	23.2N 13.8E	10	HO	35	N	N	19910411	073906	246	98	38	89
42	30	LIBYA	UAU EN NAMUS	26.0N 16.0E	22.8N 15.0E	0	HO	35	N	N	19910411	073926	246	98	40	89
42	31	LIBYA	NE TIBESTI MTS.	24.0N 20.0E	22.5N 15.8E	20	HO	35	N	N	19910411	073939	246	99	40	89
42	33	LIBYA	UAU EN NAMUS	25.0N 17.0E	22.2N 16.9E	0	HO	35	N	N	19910411	073957	246	99	41	89
42	34	LIBYA	AREA NE OF TIBESTI	22.0N 21.0E	22.0N 17.5E	5	LO	35	N	N	19910411	074007	246	99	42	89
42	35	LIBYA	AREA NE OF TIBESTI	23.0N 21.0E	21.4N 19.0E	10	LO	35	N	N	19910411	074032	246	99	44	89
42	36	LIBYA	AREA NE OF TIBESTI	22.0N 21.0E	21.1N 19.9E	5	LO	35	N	N	19910411	074046	246	99	45	89
73	86	LIBYA	STONEY DESERT AREA	27.6N 9.0E		0	LO	250	N	N	19910407	083305	247	108	43	28
73	87	LIBYA	HAMMADAT MARZUQ, CTR PVT	26.5N 13.0E	27.2N 12.2E	0	LO	250	N	N	19910407	083353	246	110	46	28
73	88	LIBYA	HAMMADAT MARZUQ, CTR PVT	27.0N 13.0E		0	LO	250	N	N	19910407	083405	246	111	47	28
73	89	LIBYA	RAMLA EL MARZUCHIA	26.2N 15.2E	26.8N 14.8E	0	LO	250	N	N	19910407	083429	246	112	49	28
73	90	LIBYA	RAMLA EL MARZUCHIA	26.2N 15.2E	26.7N 15.1E	0	LO	250	N	N	19910407	083437	246	112	49	28
73	91	LIBYA	QUR AL FARID	26.5N 16.4E		0	LO	250	N	N	19910407	083456	246	113	50	28
73	92	LIBYA	VOLCANO OF THE FLIES	26.2N 17.8E		0	LO	250	N	N	19910407	083517	246	114	52	28
73	93	LIBYA		25.8N 19.5E		0	LO	250	N	N	19910407	083544	246	116	53	28
73	94	LIBYA	AL JAWF, CTR. PIVOT IRR	24.2N 23.3E	25.1N 22.7E	0	LO	250	N	N	19910407	083633	246	118	56	28
73	95	LIBYA	SE., JABAL ARKENU	24.6N 24.7E		0	LO	250	N	N	19910407	083704	246	120	58	28
82	1	LIBYA	MARZUQ SS, PIVOT IRRIG.	26.2N 13.3E	27.0N 11.5E	0	LO	250	N	Y	19910406	091239	246	119	54	13
82	2	LIBYA	HAMADA MARZUQ, PIVOT IRR.	26.3N 12.5E	26.9N 11.7E	0	LO	250	N	Y	19910406	091242	246	119	54	13
82	3	LIBYA	MESACH MELLET, SAND SEA	26.0N 12.0E	26.9N 11.8E	0	LO	250	N	Y	19910406	091244	246	119	54	13
82	4	LIBYA	MESACH MELLET, SAND SEA	25.5N 11.7E	26.9N 12.2E	0	LO	250	N	Y	19910406	091249	246	119	54	13
82	5	LIBYA	TIRERENE DUNES, PIVOT IRR	26.5N 11.8E	26.8N 12.6E	0	LO	250	N	Y	19910406	091255	246	120	54	13
82	6	LIBYA	UBARI SS, AWBARI, PIVOT IRR	26.6N 12.2E	26.7N 12.8E	0	LO	250	N	Y	19910406	091259	246	120	55	13
82	7	LIBYA	UBARI SAND SEA, AWBARI	27.7N 12.7E	26.7N 13.0E	0	LO	250	N	Y	19910406	091302	246	120	55	13
82	8	LIBYA	ZELLAF DUNES, SABHAH, AFLD	27.0N 14.3E	26.6N 13.4E	0	LO	250	N	Y	19910406	091308	246	121	55	13
82	9	LIBYA	ZELLAF DUNES, SAMNU	27.2N 14.9E	26.6N 13.7E	0	LO	250	N	Y	19910406	091312	246	121	56	13
82	10	LIBYA	ZELLAF DUNES, TOWNS, IRRIG	27.5N 14.5E	26.6N 13.9E	0	LO	250	N	Y	19910406	091315	246	121	56	13
82	11	LIBYA	UBARI SS, WADI SHATI	27.6N 13.7E	26.5N 14.2E	0	LO	250	N	Y	19910406	091320	246	121	56	13
82	12	LIBYA	DOREL-GUSSA, DIKE	25.6N 16.5E	26.2N 15.8E	0	LO	250	N	Y	19910406	091343	246	123	57	13
82	13	LIBYA	DOREL-GUSSA, DIKE	26.0N 17.0E	26.2N 15.9E	0	LO	250	N	Y	19910406	091345	246	123	57	13
82	14	LIBYA	BLACK HARUJ	26.5N 17.5E	26.1N 16.1E	0	LO	250	N	Y	19910406	091348	246	123	58	13
82	15	LIBYA	BLACK HARUJ	26.8N 17.1E	26.1N 16.3E	0	LO	250	N	Y	19910406	091351	246	123	58	13
82	16	LIBYA	BLACK HARUJ	26.4N 16.9E	26.1N 16.5E	0	LO	250	N	Y	19910406	091354	246	124	58	13
82	17	LIBYA	DOREL-GUSSA, WADI SCEBERM	26.0N 16.3E	26.0N 16.7E	0	LO	250	N	Y	19910406	091358	246	124	58	13
82	18	LIBYA	RAMLA EL MARZUCHIA	26.2N 16.1E	26.0N 17.0E	0	LO	250	N	Y	19910406	091402	246	124	58	13
82	19	LIBYA	BLACK HARUJ, MANDIL DEPR.	26.6N 16.8E	25.9N 17.3E	0	LO	250	N	Y	19910406	091406	246	125	59	13
82	20	LIBYA	BLACK HARUJ	27.0N 17.0E	25.9N 17.5E	0	LO	250	N	Y	19910406	091409	246	125	59	13
82	21	LIBYA	FARID HILLS	25.6N 18.4E		0	LO	250	N	Y	19910406	091424	246	126	60	13
82	22	LIBYA	FARID HILLS	25.6N 18.6E		0	LO	250	N	Y	19910406	091427	246	126	60	13
82	23	LIBYA	FARID HILLS, SAND DUNES	25.5N 19.0E		0	LO	250	N	Y	19910406	091432	246	126	60	13

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
82	24	LIBYA	SAND DUNES		25.5N 19.2E	0	LO	250	N	Y	19910406	091436	246	127	60	13
82	25	LIBYA	SAND DUNES		25.4N 19.4E	0	LO	250	N	Y	19910406	091439	246	127	61	13
82	26	LIBYA	SAND DUNES		25.4N 19.7E	0	LO	250	N	Y	19910406	091444	246	127	61	13
82	27	LIBYA	LIBYA DESERT, ROADS	27.0N 22.0E	25.1N 20.8E	0	LO	250	N	Y	19910406	091500	246	129	62	13
82	28	LIBYA	LIBYA DESERT, PIVOT	27.0N 22.4E	25.0N 21.2E	0	LO	250	N	Y	19910406	091507	246	129	62	13
82	29	LIBYA	LIBYA DESERT, PIVOT	26.5N 22.4E	25.0N 21.4E	0	LO	250	N	Y	19910406	091510	246	130	62	13
82	30	LIBYA	HIGHLANDS, REBIANA SS	24.0N 22.4E	24.8N 22.1E	0	NV	250	N	Y	19910406	091520	246	130	63	13
82	31	LIBYA	HIGHLANDS, KUFRAH OASIS	24.5N 22.8E	24.7N 22.2E	0	LO	250	N	Y	19910406	091523	246	131	63	13
82	32	LIBYA	HIGHLANDS, KUFRAH OASIS	24.6N 23.0E	24.7N 22.5E	0	LO	250	N	Y	19910406	091527	246	131	63	13
82	33	LIBYA	HIGHLANDS, DESERT	25.0N 23.3E	24.6N 22.8E	0	LO	250	N	Y	19910406	091532	246	131	64	13
82	34	LIBYA	HIGHLANDS, DESERT	25.3N 23.0E	24.6N 23.0E	0	LO	250	N	Y	19910406	091535	246	132	64	13
82	35	LIBYA	HIGHLANDS, DESERT	25.6N 23.8E	24.5N 23.3E	0	LO	250	N	Y	19910406	091539	246	132	64	13
82	36	LIBYA	HIGHLANDS, DESERT	25.8N 24.5E	24.4N 23.6E	0	LO	250	N	Y	19910406	091544	246	132	64	13
82	37	LIBYA	HIGHLANDS, DESERT	25.3N 24.5E	24.3N 23.9E	0	LO	250	N	Y	19910406	091549	246	133	65	13
82	38	LIBYA	HIGHLANDS, DESERT		24.2N 24.3E	0	LO	250	N	Y	19910406	091555	246	134	65	13
82	39	LIBYA	HIGHLANDS, DESERT		24.2N 24.5E	0	LO	250	N	Y	19910406	091558	246	134	65	13
82	40	LIBYA	HIGHLANDS, LIBYAN DESERT		24.1N 24.7E	0	LO	250	N	Y	19910406	091601	246	134	65	13
82	41	LIBYA	HIGHLANDS, LIBYAN DESERT		24.1N 24.8E	0	LO	250	N	Y	19910406	091603	246	134	65	13
89	102	LIBYA	PLAT. MANGENI AREA	22.8N 14.1E	22.0N 13.4E	0	LO	250	N	Y	19910409	085608	246	109	54	59
89	103	LIBYA	EDGE-MARZUQ SAND SEA	23.2N 13.9E	22.0N 13.6E	0	LO	250	N	Y	19910409	085610	246	109	54	59
91	117	LIBYA	MESACH MELLET, YELLOW SPT	26.0N 12.5E	26.8N 12.2E	0	LO	250	N	Y	19910406	091250	246	120	54	13
91	118	LIBYA	PIVOT IRRIG, MARZUQ SS	26.0N 13.5E	26.6N 13.6E	0	LO	250	N	Y	19910406	091311	246	121	56	13
91	119	LIBYA	AGR. IRRIG, UBARI SS.	27.5N 14.5E	26.5N 14.2E	0	LO	250	N	Y	19910406	091319	246	121	58	13
91	120	LIBYA	AGR. IRRIG, UBARI SS.	27.6N 14.7E	26.3N 15.5E	0	LO	250	N	Y	19910406	091339	246	123	57	13
91	121	LIBYA	DOREL-GUSSA HILLS, DIKE	25.5N 16.8E	25.9N 17.5E	0	LO	250	N	Y	19910406	091409	246	125	59	13
91	122	LIBYA	SAND DUNES			0	LO	250	N	N						
92	79	LIBYA	UBARI SAND SEA, ADRI AREA	27.0N 13.4E	26.9N 13.6E	0	NV	250	N	N	19910407	083414	246	111	48	28
92	80	LIBYA	UBARI SAND SEA, ADRI AREA	27.5N 13.0E	26.8N 14.3E	0	LO	250	N	N	19910407	083425	246	112	49	28
92	81	LIBYA	UBARI SAND SEA, ADRI AREA	27.5N 14.0E	26.7N 15.1E	0	LO	250	N	N	19910407	083436	246	112	49	28
92	82	LIBYA	SABHAH AREA, AZ ZALLAF	26.9N 14.5E	26.6N 15.4E	0	LO	250	N	N	19910407	083441	246	113	50	28
92	83	LIBYA	RAMIA EL-MARZUCHIA AREA	26.0N 15.0E	26.5N 16.4E	0	LO	250	N	N	19910407	083456	246	113	50	28
92	84	LIBYA	EL HARUJ EL ASWAD	17.5N 18.0E	25.9N 19.1E	0	LO	250	N	N	19910407	083537	246	115	53	28
92	85	LIBYA	REBIANA SAND SEA		25.5N 21.1E	0	LO	250	N	N	19910407	083608	246	117	55	28
94	92	LIBYA	MARZUQ DESERT	25.0N 13.0E		0	LO	100	N	N						
96	75	LIBYA	MARZUQ DES., TCHIGAI P.	23.5N 13.0E		0	LO	100	N	Y						
97	3	LIBYA	COAST, VRY CLOUDY		28.2N 0.7E	95	HO	250	N	N	19910406	090959	246	110	44	13
97	8	LIBYA	MARZUQ DESERT, BLK HARUJ	26.0N 12.5E	27.6N 7.2E	0	LO	250	N	N	19910406	091134	246	115	50	13
97	9	LIBYA	MARZUQ DESERT, BLK HARUJ	26.0N 14.0E	27.2N 10.1E	0	LO	250	N	N	19910406	091218	246	117	52	13
97	10	LIBYA	BLACK HARUJ	27.0N 18.3E	27.0N 11.5E	0	LO	250	N	N	19910406	091239	246	119	54	13
97	11	LIBYA	BLACK HARUJ, REBIANA SAND	25.0N 21.0E	26.4N 14.5E	0	LO	250	N	N	19910406	091324	246	122	56	13

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	CENTER LON	NADIR LAT	NADIR LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
97	12	LIBYA	BLACK HARUJ, REBIANA SAND	25.5N	21.0E	26.3N	15.4E	0	LO	250	N	N	19910406	091337	246	123	57	13
97	13	LIBYA	COAST			26.1N	16.5E	10	HO	250	N	N	19910406	091355	246	124	58	13
97	14	LIBYA	LIBYAN DESERT, CTR. PST. IR	26.3N	23.0E	25.7N	18.3E	0	LO	250	N	N	19910406	091422	246	126	60	13
97	15	LIBYA	LIBYAN DESERT, CTR. PST. IR	25.0N	24.0E	25.5N	19.1E	0	LO	250	N	N	19910406	091434	246	127	60	13
97	16	LIBYA	LIBYAN DESERT, CTR. PST. IR	25.0N	24.0E	25.3N	19.8E	0	LO	250	N	N	19910406	091447	246	128	61	13
97	17	LIBYA	COAST			25.1N	20.8E	0	HO	250	N	N	19910406	091500	246	129	62	13
97	18	LIBYA	LIBYAN DESERT	23.5N	25.0E	25.0N	21.3E	0	LO	250	N	N	19910406	091509	246	129	62	13
97	72	LIBYA	W.EDGE MARZUQ DESERT	24.8N	9.5E	22.2N	7.1E	0	LO	250	N	N	19910406	105108	245	144	71	14
97	73	LIBYA	W.EDGE MARZUQ DESERT	24.0N	12.0E	22.1N	7.4E	0	LO	250	N	N	19910406	105113	245	145	71	14
151	117	LIBYA	EL MARZUCHIA SAND DUNES	26.5N	15.5E	26.1N	15.7E	0	NV	250	N	N	19910406	055504	246	90	15	11
151	118	LIBYA	PIVOT IRRIGATION	27.5N	21.5E	26.6N	18.8E	0	LO	250	N	Y	19910406	055551	246	91	18	11
151	119	LIBYA	PIVOT IRRIGATION	27.0N	23.0E	27.1N	21.8E	0	LO	250	N	Y	19910406	055636	246	93	20	11
151	197	LIBYA	SAHARA-PIVOT IRRIGATION	27.0N	10.5E	27.1N	10.6E	0	NV	250	N	Y	19910406	091226	246	118	53	13
151	198	LIBYA	MARZUQ ROCKY PLAIN	26.0N	12.5E	26.9N	12.0E	0	LO	250	N	Y	19910406	091246	246	119	54	13
151	199	LIBYA	ZEGHER ROCKY PLAIN	27.0N	13.0E	26.8N	12.4E	0	NV	250	N	Y	19910406	091252	246	120	54	13
151	200	LIBYA	ZEGHER ROCKY PLAIN	26.5N	14.0E	26.7N	13.0E	0	NV	250	N	Y	19910406	091302	246	120	55	13
151	201	LIBYA	SABHAH	27.0N	15.0E	26.5N	14.3E	0	NV	250	N	Y	19910406	091321	246	121	56	13
151	202	LIBYA	EL MARZUCHIA SAND DUNES	26.0N	16.5E	26.2N	15.7E	0	NV	250	N	Y	19910406	091342	246	123	57	13
151	203	LIBYA	BLACK HARUJ-AL FARID HIL	26.0N	17.0E	26.0N	17.0E	0	NV	250	N	Y	19910406	091402	246	124	58	13
151	204	LIBYA	AL FARID HILLS	26.0N	19.0E	25.7N	18.3E	0	NV	250	N	Y	19910406	091422	246	126	60	13
151	205	LIBYA	DUNES	25.5N	20.5E	25.4N	19.6E	0	NV	250	N	Y	19910406	091442	246	127	61	13
151	206	LIBYA	CALANCIO SAND SEA	25.0N	21.5E	25.1N	21.0E	0	NV	250	N	Y	19910406	091503	246	129	62	13
151	207	LIBYA	AL KUFRAH-PIVOT IRR.	25.0N	23.0E	24.8N	22.2E	0	NV	250	N	Y	19910406	091522	246	131	63	13
152	77	LIBYA	COAST-MED. -CRETE			27.2N	24.1E	50	HO	250	N	N	19910407	051814	246	89	14	26
152	162	LIBYA	EL ASWAD	29.0N	14.0E	28.4N	13.0E	0	NV	250	N	Y	19910407	065448	246	96	25	27
152	163	LIBYA	JABAL AS SAWDA	28.0N	15.5E	28.5N	14.7E	0	NV	250	N	Y	19910407	065514	246	97	27	27
152	164	LIBYA	NEAR CALANCIO SAND SEA	29.5N	19.5E	28.5N	20.8E	0	LO	250	N	N	19910407	065642	247	101	33	27
152	165	LIBYA	CLOUDS-JET STREAM-DESERT			28.4N	22.4E	80	LO	250	N	N	19910407	065706	247	102	34	27
152	242	LIBYA	IDCHAN OF UBARI	27.5N	11.0E	27.4N	10.4E	0	NV	250	N	Y	19910407	083326	247	109	45	28
152	243	LIBYA	EL ASWAD	28.5N	14.0E	27.3N	11.4E	5	LO	250	N	N	19910407	083341	247	110	46	28
152	244	LIBYA	ZEGHER ROCKY PLAIN	27.0N	13.0E	27.2N	12.2E	0	NV	250	N	Y	19910407	083353	246	110	46	28
152	245	LIBYA	MARZUQ-WADI AN NASHU	26.0N	14.0E	26.9N	14.0E	0	NV	250	N	Y	19910407	083420	246	112	48	28
152	246	LIBYA	EL MARZUCHIA SAND DUNES	26.5N	16.0E	26.7N	15.2E	0	NV	250	N	Y	19910407	083438	246	112	49	28
152	247	LIBYA	BLACK HARUJ	27.5N	17.5E	26.4N	16.5E	0	NV	250	N	Y	19910407	083457	246	113	50	28
152	248	LIBYA	BLACK HARUJ-DUNES	26.0N	19.0E	26.2N	18.0E	0	NV	250	N	Y	19910407	083520	246	115	52	28
152	249	LIBYA	TIBESTI	24.0N	18.5E	25.9N	19.3E	0	LO	250	N	N	19910407	083541	246	116	53	28
152	250	LIBYA	MAABUS IUSEF	25.5N	21.0E	25.7N	20.3E	0	NV	250	N	N	19910407	083555	246	116	54	28
152	251	LIBYA	CALANCIO SAND SEA-JAWF	25.0N	22.5E	25.2N	22.1E	15	NV	250	N	N	19910407	083624	246	118	56	28
85	37	LINE ISLANDS	MALDEN IS.	4.0S	154.9W	3.3S	153.0W	5	LO	250	N	N	19910408	235054	245	293	63	53
89	87	LINE ISLANDS	CHRISTMAS I., CLD COVER	1.9N	157.3W	0.6S	157.8W	60	LO	250	N	N	19910408	234923	245	292	69	53

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		MADIR		CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN	EL	OR
				LAT	LONG	LAT	LONG												
89	88	LINE ISLANDS	MALDEN ISLAND	4.0S	155.0W	3.8S	152.1W	15	L0	250	N	N	19910408	235111	245	293	82	53	
15	25	MADAGASCAR	SW COAST	25.0S	44.0E	24.2S	40.0E	75	H0	35	N	N	19910410	132701	245	290	22	77	
15	26	MADAGASCAR	SW COAST, LINTA RIVER	25.0S	44.0E	24.5S	40.9E	75	L0	35	N	N	19910410	132716	245	290	21	77	
15	27	MADAGASCAR	SW COAST, MEMARANDRA R.	25.0S	45.0E	25.1S	43.4E	70	L0	35	N	N	19910410	132755	245	289	19	77	
15	28	MADAGASCAR	S. MADAGASCAR MOUNTAINS	25.0S	45.0E	25.4S	44.8E	70	L0	35	N	N	19910410	132816	245	288	17	77	
15	29	MADAGASCAR	S. MADAGASCAR MOUNTAINS	25.0S	45.0E	25.6S	45.4E	70	L0	35	N	N	19910410	132825	245	288	17	77	
74	11	MADAGASCAR	CENTRAL MTNS.	20.2S	45.2E	20.0S	49.7E	50	L0	250	N	N	19910409	122824	245	291	31	61	
74	12	MADAGASCAR	ANTANANARIVO AREA	19.1S	47.5E	20.3S	50.6E	60	NV	250	N	N	19910409	122838	245	291	30	61	
74	13	MADAGASCAR	SO. OF ANTANANARIVO	20.5S	50.9E	20.5S	50.9E	90	L0	250	N	N	19910409	122843	245	291	30	61	
74	14	MADAGASCAR	CSTL MTNS. NEAR MAHANORO	20.6S	51.4E	20.6S	51.4E	90	L0	250	N	N	19910409	122851	245	291	29	61	
74	15	MADAGASCAR	CSTL MTNS. NEAR MAHANORO	20.9S	52.2E	20.9S	52.2E	90	L0	250	N	N	19910409	122905	245	290	28	61	
75	35	MADAGASCAR	STORM CLOUD, N. END IS.	10.6S	47.3E	10.6S	47.3E	95	H0	250	N	N	19910408	124406	242	283	30	15	
75	36	MADAGASCAR	STORM CLOUD, N. END IS.	11.0S	48.1E	11.0S	48.1E	95	H0	250	N	N	19910408	124420	242	283	29	15	
75	37	MADAGASCAR	STORM CLOUD, N. END IS.	11.4S	48.7E	11.4S	48.7E	95	H0	250	N	N	19910408	124432	242	283	28	15	
75	38	MADAGASCAR	STORM CLOUD, N. END IS.	11.5S	49.0E	11.5S	49.0E	95	H0	250	N	N	19910408	124437	242	283	28	15	
75	39	MADAGASCAR	STORM CLOUD, N. END IS.	12.2S	49.2E	11.8S	49.5E	80	L0	250	N	N	19910408	124446	242	283	27	15	
77	57	MADAGASCAR	NW COAST, VRY CLOUD, DARK	11.1S	48.2E	11.1S	48.2E	80	L0	250	N	N	19910408	124423	242	283	29	15	
77	58	MADAGASCAR	NW COAST, VRY CLOUD, DARK	11.4S	48.8E	11.4S	48.8E	80	L0	250	N	N	19910408	124433	242	283	28	15	
83	38	MADAGASCAR	SW PANORAMA-TR. WIND CLDS	20.1S	50.0E	20.1S	50.0E	80	H0	100	N	N	19910409	122828	245	290	27	61	
87	52	MADAGASCAR	TSIRIBITHINA R/DELTA, CST	19.8S	44.3E	18.1S	44.8E	85	L0	250	U	N	19910409	122700	245	292	33	61	
87	53	MADAGASCAR	MAHARIVO R/MOUTH, COAST	20.5S	44.5E	18.1S	45.0E	70	L0	250	U	N	19910409	122703	245	292	33	61	
87	54	MADAGASCAR	RIVERS, COAST	21.3S	43.9E	18.2S	45.2E	50	L0	250	N	N	19910409	122707	245	292	33	61	
87	55	MADAGASCAR	COASTAL PLAIN	21.5S	44.2E	18.3S	45.4E	45	L0	250	N	Y	19910409	122711	245	292	32	61	
87	56	MADAGASCAR	MAHARIVO R, COASTAL PLAIN	20.8S	44.7E	18.4S	45.6E	60	L0	250	N	Y	19910409	122714	245	292	32	61	
87	57	MADAGASCAR	COASTAL PLAIN, HILLS	20.4S	45.2E	18.5S	45.8E	60	L0	250	N	Y	19910409	122717	245	292	32	61	
87	58	MADAGASCAR	SAKENY R, TSIRIBITHINA R.	20.0S	45.5E	18.5S	46.0E	40	L0	250	N	Y	19910409	122720	245	292	32	61	
87	59	MADAGASCAR	MOUNTAINS	18.8S	46.5E	18.8S	46.5E	80	L0	250	N	Y	19910409	122730	245	291	31	61	
87	60	MADAGASCAR	MOUNTAINS	18.9S	46.7E	18.9S	46.7E	85	L0	250	N	Y	19910409	122733	245	291	31	61	
87	61	MADAGASCAR	MOUNTAINS	18.9S	46.9E	18.9S	46.9E	85	L0	250	N	Y	19910409	122736	245	291	31	61	
87	62	MADAGASCAR	MOUNTAINS, CLOUDS	19.1S	47.3E	19.1S	47.3E	90	L0	250	N	N	19910409	122742	245	291	30	61	
87	63	MADAGASCAR	MOUNTAINS, WEST CST, CLDS	17.9S	49.3E	19.4S	48.0E	85	L0	250	N	Y	19910409	122755	245	291	30	61	
87	64	MADAGASCAR	MOUNTAINS, WEST CST, CLDS	18.4S	49.2E	19.4S	48.2E	90	L0	250	N	Y	19910409	122758	245	291	29	61	
87	65	MADAGASCAR	WEST COAST, CLOUDS	19.0S	49.0E	19.5S	48.4E	75	L0	250	N	Y	19910409	122802	245	291	29	61	
87	66	MADAGASCAR	WEST COAST, CLOUDS	19.5S	48.8E	19.6S	48.6E	75	L0	250	N	Y	19910409	122805	245	291	29	61	
87	67	MADAGASCAR	WEST COAST, CLOUDS	20.1S	48.6E	19.7S	48.8E	80	L0	250	N	Y	19910409	122808	245	291	29	61	
89	37	MADAGASCAR	EAST COAST	14.0S	50.1E	12.2S	54.2E	80	L0	250	N	Y	19910408	112820	245	290	40	45	
89	38	MADAGASCAR	EAST COAST	15.2S	50.6E	12.5S	54.8E	80	L0	250	N	Y	19910408	112831	245	290	40	45	
89	48	MADAGASCAR	MANAMBOLO R, COAST	19.2S	44.3E	18.9S	44.9E	40	NV	250	U	N	19910408	130606	244	287	24	46	
89	49	MADAGASCAR	TSIRIBITHINA R/DELTA	19.8S	44.5E	19.1S	45.5E	60	NV	250	U	N	19910408	130615	244	287	24	46	
89	50	MADAGASCAR	TSIRIBITHINA R, SAKENY R.	19.8S	45.4E	19.3S	45.9E	50	NV	250	U	N	19910408	130623	244	287	23	46	

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL	OR
89	51	MADAGASCAR	SAKENY RIVER	20.4S 45.6E	19.4S 46.2E	40	LO	250	U	N	19910408	130628	244	287	23	46
89	52	MADAGASCAR	MOUNTAINS		19.7S 47.0E	60	LO	250	U	N	19910408	130640	244	286	22	46
89	53	MADAGASCAR	MOUNTAINS		20.0S 47.6E	80	LO	250	U	N	19910408	130651	244	286	21	46
89	54	MADAGASCAR	MOUNTAINS		20.0S 47.8E	80	LO	250	U	N	19910408	130654	244	286	21	46
89	55	MADAGASCAR	MOUNTAINS		20.1S 48.0E	80	LO	250	U	Y	19910408	130657	244	286	21	46
89	56	MADAGASCAR	MOUNTAINS		20.2S 48.1E	70	LO	250	U	Y	19910408	130700	244	286	21	46
89	57	MADAGASCAR	MOUNTAINS		20.4S 48.7E	70	LO	250	U	N	19910408	130709	244	286	20	46
89	58	MADAGASCAR	MANGORO R. COAST, MTNS	20.0S 48.6E	21.0S 50.4E	30	LO	250	U	N	19910408	130738	244	285	18	46
152	41	MADAGASCAR	MAHAJAMBA BAY	14.5S 47.0E	10.9S 47.9E	50	LO	250	N	Y	19910406	124416	242	283	29	15
152	42	MADAGASCAR	MAHAJAMBA, BOMBETOKA BAY		11.1S 48.1E	75	LO	250	N	N	19910406	124421	242	283	29	15
152	43	MADAGASCAR	CAP D' AMBRE	12.5S 49.0E	11.4S 48.8E	45	NV	250	N	Y	19910406	124434	242	283	28	15
152	44	MADAGASCAR	CAP D' AMBRE	12.0S 48.5E	11.8S 49.2E	30	NV	250	N	Y	19910406	124440	242	283	28	15
152	45	MADAGASCAR	NORTH EASTERN TIP	12.5S 48.5E	11.8S 49.6E	45	LO	250	N	Y	19910406	124448	242	283	27	15
74	1	MALAWI	LAKE CHILWA AREA	15.4S 36.7E	15.7S 39.3E	60	LO	250	N	N	19910409	122525	245	294	42	61
74	2	MALAWI	LAKE CHILWA AREA	15.0S 35.9E	15.8S 39.5E	70	LO	250	N	N	19910409	122528	245	294	42	61
74	3	MALAWI	LAKE CHILWA AREA	14.9S 36.0E	15.9S 39.9E	70	LO	250	N	N	19910409	122535	245	294	42	61
87	45	MALAWI	LAKE CHILWA	15.3S 35.7E	14.2S 36.1E	70	LO	250	U	Y	19910409	122428	245	294	43	61
87	46	MALAWI	LAKE CHILWA	15.8S 35.7E	14.6S 37.0E	70	LO	250	U	Y	19910409	122443	245	294	42	61
87	47	MALAWI	LAKE CHILWA	15.5S 35.8E	15.4S 38.8E	70	LO	250	N	N	19910409	122516	245	294	40	61
89	46	MALAWI	L. NYASA-NORTH END	9.8S 33.8E	13.0S 31.9E	75	LO	250	U	Y	19910408	130216	245	290	39	46
89	47	MALAWI	L. NYASA-NO. END	10.4S 34.0E	13.1S 32.1E	75	LO	250	U	Y	19910408	130221	245	290	39	46
90	79	MALAWI	LAKE NYASA, DARK	12.5S 34.3E	15.7S 33.6E	70	LO	250	U	N	19910406	142036	242	282	19	16
90	80	MALAWI	SIDE OF MTN RIDGE, DARK		16.4S 35.2E	40	LO	250	U	N	19910406	142103	242	282	17	16
151	148	MALAYSIA	BORNEO-KOTA KINABALU	6.0N 116.0E	4.5N 116.3E	40	LO	250	N	Y	19910406	062157	243	274	58	11
152	134	MALAYSIA	BORNEO-PAPAR-SUNGLINT	6.0N 116.0E	5.7N 116.2E	40	NV	250	N	Y	19910407	054252	244	273	68	26
152	135	MALAYSIA	BORNEO-PEGATAN R.-SUNGLT	5.5N 116.0E	5.3N 116.8E	45	NV	250	N	Y	19910407	054304	244	274	68	26
152	221	MALAYSIA	SINGAPORE	1.5N 103.5E	0.1S 102.2E	50	LO	250	N	Y	19910407	071827	243	282	57	27
152	222	MALAYSIA	SINGAPORE-S.CHINA SEA CO	2.0N 104.0E	0.2S 102.5E	50	LO	250	N	Y	19910407	071933	243	282	57	27
153	184	MALAYSIA	MARUDU BAY, CROCKER MTNS	6.5N 116.0E	8.9N 116.2E	30	LO	250	N	N	19910410	034557	247	97	82	71
41	11	MALDIVES	MALCOLM ATOLL	7.0N 73.0E	7.9N 72.1E	5	LO	35	N	N	19910411	061540	248	88	78	88
41	12	MALDIVES	IHAVANDIFFULU ATOLL	7.0N 73.0E	7.0N 73.6E	10	LO	35	N	N	19910411	061608	248	84	77	88
41	13	MALDIVES	MALE, ARI, FELIDU ATOLLS	4.0N 73.0E	6.7N 74.1E	25	LO	35	N	N	19910411	061618	248	82	78	88
41	14	MALDIVES	MALE, ARI, FELIDU ATOLLS	3.0N 74.0E	5.4N 76.5E	25	LO	35	N	N	19910411	061703	248	73	80	88
90	22	MALDIVES	MALCOLM ATOLL, KOFENBE I	6.2N 72.6E	3.7N 69.9E	50	LO	250	U	N	19910406	092917	243	276	58	13
90	23	MALDIVES	ARI ATOLL, HULULE, RASDU A	3.9N 72.9E	3.2N 70.7E	50	LO	250	U	N	19910406	092932	243	276	57	13
90	24	MALDIVES	KOLUMADULU A, HADDUMMATI	2.3N 73.2E	2.6N 71.8E	35	LO	250	U	N	19910406	092952	243	277	56	13
90	25	MALDIVES	SUVADIVA ATOLL	0.6N 73.2E	1.0N 74.6E	30	LO	250	N	N	19910406	093046	243	279	53	13
90	26	MALDIVES	SUVADIVA ATOLL	0.5N 73.2E	0.7N 75.1E	30	LO	250	N	N	19910406	093056	243	279	52	13
95	7	MALDIVES	ATOLLS	4.9N 73.0E	4.2N 69.1E	20	NV	250	N	N	19910406	092901	243	275	59	13
95	8	MALDIVES	ATOLLS	4.4N 73.2E	4.0N 69.5E	10	NV	250	N	N	19910406	092908	243	275	58	13

**TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)**

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
95	9	MALDIVES	ATOLLS	3.4N 73.2E	3.9N 69.6E	10	NV	250	N	N	19910406	092911	243	276	58	13
95	10	MALDIVES	ATOLLS	2.7N 73.2E	3.8N 69.7E	10	NV	250	N	N	19910406	092915	243	276	58	13
95	11	MALDIVES	ATOLLS	2.2N 73.2E	3.8N 69.8E	10	NV	250	N	N	19910406	092915	243	276	58	13
95	12	MALDIVES	ATOLLS	2.2N 73.2E	2.5N 72.0E	10	NV	250	N	N	19910406	092956	243	277	56	13
97	42	MALDIVES	INDIAN OCEAN		5.5N 66.8E	40	HO	250	N	N	19910406	092818	243	273	61	13
97	43	MALDIVES	ATOLLS	4.0N 73.0E	5.3N 67.2E	50	LO	250	N	N	19910406	092825	243	273	61	13
97	44	MALDIVES	ATOLLS	3.8N 73.2E	4.2N 69.1E	50	LO	250	N	N	19910406	092900	243	276	59	13
97	45	MALDIVES	ATOLLS	3.3N 73.3E	4.0N 69.5E	40	LO	250	N	N	19910406	092908	243	276	58	13
97	46	MALDIVES	ATOLLS	2.4N 73.2E	3.7N 69.9E	50	LO	250	N	N	19910406	092917	243	276	58	13
97	47	MALDIVES	ATOLLS	0.8N 73.2E	3.4N 70.4E	40	LO	250	N	N	19910406	092926	243	276	57	13
97	48	MALDIVES	ATOLLS		3.1N 70.9E	40	LO	250	N	N	19910406	092936	243	276	57	13
97	49	MALDIVES	ATOLLS	3.6N 73.4E	2.8N 71.5E	40	LO	250	N	N	19910406	092947	243	277	56	13
151	237	MALDIVES	KOLUMADULU, MILANDU ATOLLS	2.5N 72.5E	2.7N 71.6E	15	NV	250	N	N	19910406	092949	243	277	56	13
9	30	MALI	N CENTRAL AREA		19.9N 0.7W	0	LO	35	N	N	19910411	091510	246	100	48	90
9	31	MALI	NIGER RIVER, NE. INL. DELTA	18.0N 1.0W	19.1N 1.5E	0	LO	35	N	N	19910411	091546	246	100	50	90
45	30	MALI	L. FAGUIBINE, IRGUI AZAOUAD	19.0N 2.0W	20.1N 2.9W	0	LO	35	N	N	19910410	095251	247	105	54	75
75	4	MALI	NIGER R., LTD VIEW EARTH		22.9N 19.0W	0	HO	250	N	N	19910406	122359	245	139	68	15
77	14	MALI	NIGER RIVER		17.3N 3.9W	0	LO	250	N	N	19910406	122810	244	192	78	15
77	15	MALI	INLAND DELTA AREA	4.0N 16.5W	17.0N 3.3W	0	LO	250	N	N	19910406	122822	244	198	78	15
77	16	MALI	NIGER RIVER AREA	17.0N 1.5W	16.8N 2.4W	0	LO	250	N	N	19910406	122837	244	201	79	15
77	17	MALI	SE. MALI		16.0N 1.0W	0	LO	250	N	N	19910406	122902	244	210	78	15
80	1	MALI	BAOULE, DEGOU RIVERS	10.5N 7.5W	10.1N 7.3W	0	NV	250	N	Y	19910409	121049	246	116	84	61
80	2	MALI	BAOULE, BANIFING RIVERS	10.5N 7.5W	10.0N 7.2W	5	NV	250	N	Y	19910409	121051	246	116	84	61
80	3	MALI	BANIFING RIVER	10.5N 7.0W	10.0N 7.1W	5	NV	250	N	Y	19910409	121053	246	117	84	61
83	15	MALI	GASRAOUAT DEPR., DUNES	18.5N 5.0W	20.0N 4.7W	0	LO	100	N	Y	19910409	103107	246	111	60	60
83	16	MALI	LAC FAGUIBINE, NIGER R.	16.6N 3.7W	19.4N 3.1W	0	LO	100	N	Y	19910409	103134	246	111	62	60
83	17	MALI	NIGER R., IRGUI AZAOUAD	18.5N 2.5W	19.1N 2.5W	0	LO	100	N	Y	19910409	103145	246	112	63	60
83	18	MALI	NIGER RIVER, NIGER	15.0N 1.0W	18.4N 0.9W	10	LO	100	N	N	19910409	103212	246	112	64	60
83	19	MALI	NIGER R., GAO, TIELEMSI WADI	18.0N 0.5E	18.2N 0.3W	0	LO	100	N	Y	19910409	103223	246	112	65	60
83	20	MALI	WADI TELMSI, MT. ILEBJANE	18.0N 1.0E	18.0N 0.3E	0	LO	100	N	Y	19910409	103232	246	113	66	60
83	21	MALI	DESERT, DUST		17.3N 1.9E	0	LO	100	N	Y	19910409	103300	246	113	67	60
83	22	MALI	DESERT, DUST		16.8N 2.8E	0	LO	100	N	Y	19910409	103317	246	114	68	60
84	35	MALI	NIGER RIVER, SAND DUNES	17.0N 2.0W		0	NV	250	N	Y						
84	36	MALI	NIGER RIVER, SAND DUNES	17.0N 1.0W		0	NV	250	N	Y						
84	37	MALI	NIGER RIVER, SAND DUNES	16.5N 0.0		0	LO	250	N	Y						
84	38	MALI	ESCARPMENTS N. OF NIGER	18.5N 0.5E		0	LO	250	N	N						
84	39	MALI	ILEBJANE ESCARPMENT	18.5N 1.0E		0	LO	250	N	N						
84	40	MALI	SAKAREZOU, TAKADAMOU MTS	16.5N 3.5E		0	LO	250	N	N						
84	92	MALI	BAFING RIVER RESERVOIR	13.0N 10.5W		0	LO	250	N	N						
84	93	MALI	BAFING RIVER	13.5N 11.0W		0	LO	250	N	Y						



TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
84	94	MALI	BAFING RIVER	12.5N 10.5W		0	LO	250	N	Y	19910409	120937	246	116	79	61
88	89	MALI	BAFING R/RESERVOIR, AGR.	13.0N 10.5W	12.1N 11.2W	0	LO	250	N	Y	19910409	121031	246	116	83	61
88	98	MALI	NIGER R,BALE R/RESERVOIR	11.5N 8.2W	10.6N 8.3W	20	NV	250	U	N	19910409	121056	246	117	84	61
88	101	MALI	NIGER R,BANI R,FALA R.	13.4N 6.3W	9.9N 6.9W	0	LO	250	N	Y	19910409	121059	246	117	84	61
88	102	MALI	NIGER R,BAOULE R.	13.0N 7.3W	9.8N 6.8W	15	LO	250	N	Y	19910409	121111	246	117	85	61
88	103	MALI	BANI RIVER, DARK	13.0N 5.2W	9.5N 6.1W	0	LO	250	N	Y	19910409	110945	247	121	67	45
98	100	MALI	NE OF INLAND DELTA		19.7N 18.0N	5	LO	250	N	N	19910408	111058	247	125	72	45
98	101	MALI	NE OF INLAND DELTA		18.0N 17.9N	0	LO	250	N	N	19910408	111100	247	125	72	45
98	102	MALI	NE OF INLAND DELTA		17.9N 17.9N	0	LO	250	N	N	19910408	111102	247	126	72	45
98	103	MALI	NE OF INLAND DELTA		17.9N 17.9N	0	LO	250	N	N	19910408	111104	247	126	72	45
98	104	MALI	NE OF INLAND DELTA		17.8N 17.7N	0	LO	250	N	N	19910408	111109	247	126	72	45
98	105	MALI	NE OF INLAND DELTA		17.7N 17.3N	0	LO	250	N	N	19910408	111126	247	127	73	45
98	106	MALI	NE OF INLAND DELTA		17.3N 17.3N	0	LO	250	N	N	19910408	111128	247	127	74	45
98	107	MALI	NE OF INLAND DELTA		17.3N 17.3N	0	LO	250	N	N	19910408	111128	247	127	74	45
98	108	MALI	NE OF INLAND DELTA		17.3N 17.3N	0	LO	250	N	N	19910408	111128	247	127	74	45
151	243	MALI	ERG CHECH	25.5N 5.0W	25.5N 4.7W	0	NV	250	N	Y	19910406	104802	246	126	60	14
85	38	MARQUESAS ISLANDS		9.0S 140.0W	9.9S 141.2W	40	LO	250	N	N	19910408	235437	245	293	49	53
85	39	MARQUESAS ISLANDS		10.3S 140.6W	10.3S 140.6W	40	LO	250	N	N	19910408	235449	245	293	48	53
89	89	MARQUESAS ISLANDS	NUKU HIVA, DARK	8.9S 140.1W	10.2S 140.8W	35	LO	250	U	N	19910408	235445	245	293	48	53
89	90	MARQUESAS ISLANDS	UA POU, DARK	9.4S 140.0W	10.3S 140.6W	35	LO	250	U	N	19910408	235449	245	293	48	53
89	91	MARQUESAS ISLANDS	HIVA OA, TAHUATA, DARK	9.9S 139.1W	10.8S 139.6W	50	LO	250	U	N	19910408	235506	245	293	47	53
89	92	MARQUESAS ISLANDS	FATU IVA, DARK	10.5S 138.6W	11.3S 138.6W	50	LO	250	U	N	19910408	235526	245	293	46	53
9	23	MAURITANIA	PANORAMIC VIEW	20.0N 12.0W	25.0N 16.9W	5	HO	35	N	N	19910411	091048	245	96	31	90
9	29	MAURITANIA	N CENTRAL AREA	20.0N 12.0W	25.0N 16.9W	0	LO	35	N	N	19910411	091430	246	99	45	90
45	28	MAURITANIA	RICHAT STRUCTURE	22.0N 10.0W	22.6N 10.2W	0	LO	35	N	N	19910410	095051	246	103	46	75
75	3	MAURITANIA	RICHAT,LTD.VIEW OF EARTH	21.0N 16.8W	22.2N 16.8W	0	HO	250	N	N	19910408	122312	246	134	66	15
77	10	MAURITANIA	BAIE DU LEVRIER AREA	21.0N 16.8W	22.2N 16.8W	5	LO	250	N	N	19910406	122434	245	143	70	15
77	11	MAURITANIA	RICHAT STRUCTURE	21.8N 12.3W	21.3N 14.0W	0	LO	250	N	N	19910406	122520	245	150	73	15
77	12	MAURITANIA	RICHAT STRUCTURE	21.8N 12.3W	21.0N 13.2W	0	LO	250	N	N	19910406	122534	245	152	73	15
77	13	MAURITANIA	DESERT	21.8N 12.3W	19.0N 7.9W	0	LO	250	N	N	19910406	122702	245	171	77	15
83	4	MAURITANIA	A ZEFAL DUNE FIELD	20.5N 15.0W	23.2N 14.3W	5	LO	100	N	N	19910409	102831	246	107	50	60
83	5	MAURITANIA	RICHAT STRUCTURE	21.1N 11.4W	22.6N 12.4W	0	LO	100	N	Y	19910409	102901	246	108	52	60
83	6	MAURITANIA	RICHAT STRUCTURE	21.1N 11.4W	22.5N 11.9W	0	LO	100	N	Y	19910409	102909	246	108	53	60
83	7	MAURITANIA	DHAR ADRAR,RICHAT STRUCT	20.0N 12.5W	22.0N 10.5W	0	LO	100	N	Y	19910409	102932	246	109	54	60
83	8	MAURITANIA	DHAR ADRAR,RICHAT STRUCT	20.0N 12.5W	21.7N 9.4W	0	LO	100	N	Y	19910409	102949	246	109	55	60
83	9	MAURITANIA	TAMOKHART DUNE FIELD	20.0N 11.0W	21.5N 8.9W	0	LO	100	N	Y	19910409	102958	246	109	56	60
83	10	MAURITANIA	TAGANT PLAT,AOUKER BASIN	18.5N 9.5W	21.3N 8.3W	0	LO	100	N	Y	19910409	103007	246	109	56	60
83	11	MAURITANIA	AOUKER BASIN RIM, DEPR.	19.5N 7.5W	21.2N 8.0W	0	LO	100	N	Y	19910409	103012	246	109	57	60
83	12	MAURITANIA	IJAFENE D,KNACHICH HILLS	20.5N 6.5W	21.0N 7.6W	0	LO	100	N	Y	19910409	103020	246	110	57	60
83	13	MAURITANIA	GASRAOUAT DEPRESSION	19.0N 6.0W	20.9N 7.3W	0	LO	100	N	Y	19910409	103025	246	110	57	60

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	LONG	MADIR LAT	LONG	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL	OR
83	14	MAURITANIA	AOUER BASIN/NORTH RIM	18.0N	8.5W	20.4N	5.8W	0	LO	100	N	Y	19910409	103049	246	110	59	60
84	19	MAURITANIA	MALICHIGDANE DUNES	20.0N	14.5W			0	LO	250	N	Y						
84	20	MAURITANIA	NEAR VILLAGE OF ATAR	20.0N	13.5W			0	LO	250	N	Y						
84	21	MAURITANIA	NEAR VILLAGE OF ATAR	20.5N	13.0W			0	LO	250	N	Y						
84	22	MAURITANIA	AROUBA DUNES NEAR ATAR	21.0N	13.0W			0	LO	250	N	Y						
84	23	MAURITANIA	KHZEHA DUNES	21.0N	13.5W			0	LO	250	N	Y						
84	24	MAURITANIA	KHZEHA DUNES	21.0N	14.0W			0	LO	250	N	Y						
84	25	MAURITANIA	KHZEHA DUNES	20.5N	14.5W			0	LO	250	N	Y						
84	26	MAURITANIA	RICHAT STRUCTURE	21.0N	11.5W			0	NV	250	N	Y						
84	27	MAURITANIA	RICHAT STRUCTURE	21.0N	11.5W			0	NV	250	N	Y						
84	28	MAURITANIA	D'ALAFIA DUNES	22.0N	11.5W			0	LO	250	N	Y						
84	29	MAURITANIA	CLIFFS, SAND DUNES	18.5N	10.5W			0	LO	250	N	Y						
84	30	MAURITANIA	CLIFFS, SAND DUNES	18.5N	9.5W			0	LO	250	N	Y						
84	31	MAURITANIA	CLIFFS, SAND DUNES	18.5N	8.5W			0	LO	250	N	Y						
84	32	MAURITANIA	CLIFFS, SAND DUNES	17.5N	7.5W			0	LO	250	N	Y						
84	33	MAURITANIA	NEMA CLIFF, SAND DUNES	17.0N	7.0W			0	LO	250	N	Y						
84	34	MAURITANIA	NEMA CLIFFS, SAND DUNES	16.0N	6.5W			0	LO	250	N	Y						
88	45	MAURITANIA	HASSIANE CUESTA, DESERT	22.0N	12.2W	22.6N	12.3W	0	NV	250	N	Y	19910409	102903	246	108	52	60
88	46	MAURITANIA	HASSIANE CUESTA, DESERT	22.1N	12.0W	22.5N	12.0W	0	NV	250	N	Y	19910408	102908	246	108	52	60
88	47	MAURITANIA	ADRAR DHAR, DESERT	21.3N	11.9W	22.4N	11.5W	0	NV	250	N	Y	19910409	102916	246	108	53	60
88	48	MAURITANIA	RICHAT STRUCTURE, DESERT	21.2N	11.5W	22.2N	11.1W	0	NV	250	N	Y	19910409	102922	246	108	53	60
88	49	MAURITANIA	RICHAT STRUCTURE, DESERT	21.1N	11.3W	22.0N	10.5W	0	NV	250	N	Y	19910409	102932	246	108	54	60
88	50	MAURITANIA	ADRAR DHAR, DESERT	21.0N	10.5W	21.9N	10.2W	0	NV	250	N	Y	19910409	102936	246	109	54	60
90	36	MAURITANIA	AZEFAL DUNES, RCK OUTCRPS	22.0N	13.0W	21.3N	14.1W	0	LO	250	N	N	19910408	122519	245	150	73	15
90	37	MAURITANIA	RICHAT STRUCTURE	21.2N	11.5W	20.9N	13.1W	0	LO	250	N	N	19910408	122535	245	152	73	15
90	38	MAURITANIA	SEBKHA DE CHEMCHANE	21.0N	12.2W	20.7N	12.4W	0	NV	250	N	N	19910408	122547	245	154	74	15
90	39	MAURITANIA	RICHAT STRUCTURE	21.1N	11.3W	20.4N	11.6W	0	LO	250	N	N	19910408	122600	245	157	74	15
92	90	MAURITANIA	RICHAT STRUCTURE	21.0N	11.4W	21.3N	12.1W	0	LO	250	N	N	19910407	114651	246	130	68	30
96	38	MAURITANIA	RICHAT ST., ANTI ATLAS	25.0N	11.5W			10	HO	100	N	N						
97	66	MAURITANIA	VIEW TO SE, NIGER RIVER			25.2N	3.6W	0	HO	250	N	N	19910408	104818	246	127	61	14
97	67	MAURITANIA	VIEW TO SE, NIGER RIVER			25.1N	3.1W	0	HO	250	N	N	19910408	104826	246	128	62	14
98	68	MAURITANIA	ADRAR MTNS.	21.9N	13.6W	21.9N	14.0W	20	LO	250	N	N	19910407	114621	246	128	67	30
98	69	MAURITANIA	RICHAT STRUCTURE	21.0N	11.2W	21.5N	12.7W	5	LO	250	N	N	19910407	114641	246	130	68	30
98	70	MAURITANIA	RICHAT STRUCTURE	21.0N	11.8W	21.0N	11.4W	5	LO	250	N	N	19910407	114703	246	131	69	30
98	71	MAURITANIA	ERG CHECH	22.8N	8.5W	20.3N	9.4W	0	LO	250	N	N	19910407	114736	245	135	71	30
98	72	MAURITANIA	ERG CHECH	22.5N	8.0W	20.2N	9.2W	0	LO	250	N	N	19910407	114740	245	136	71	30
99	28	MAURITANIA	RICHAT STRUCTURE	21.0N	11.5W	20.7N	10.6W	0	LO	40	N	N	19910407	114717	245	133	70	30
152	13	MAURITANIA	RICHAT STRUCTURE-E. CHECH	20.5N	10.5W	19.9N	10.3W	0	NV	250	N	N	19910408	122622	245	161	75	15
74	20	MAURITIUS	VRY CLDY OVER ISLAND	20.5S	57.6E	23.5S	60.2E	60	LO	250	N	N	19910409	123115	245	287	20	61
86	67	MAURITIUS		20.0S	57.5E	14.3S	58.5E	70	LO	250	N	N	19910408	112937	244	289	35	45

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	CENTER LON	MADIR LAT	MADIR LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL	OR
86	68	MAURITIUS	CARADOS CARAJOS SHOALS	16.7S	59.7E	15.0S	59.9E	40	LO	250	N	N	19910408	113003	244	289	34	45
86	69	MAURITIUS	RODRIGUES	19.7S	63.3E	16.8S	63.8E	40	LO	250	N	N	19910408	113112	244	288	29	45
87	69	MAURITIUS	CLOUD COVERED, DARK	20.4S	57.5E	22.2S	55.8E	50	LO	250	U	N	19910409	123004	245	288	21	61
152	256	MEDITERRANEAN SEA	NILE DELTA-CYPRUS		23.1N	30.0E		20	HO	250	N	Y	19910407	083827	246	125	63	28
16	3	MEXICO	N. BAJA PEN., COL. RIVER	31.0N	116.0W	25.5N	115.9W	15	LO	35	N	N	19910410	160203	245	98	34	79
16	5	MEXICO	CENTRAL BAJA CALIFORNIA	26.0N	112.0W	24.5N	112.0W	5	LO	35	N	N	19910410	160305	246	99	38	79
16	6	MEXICO	SIERRA MADRE OCCIDENTAL	28.0N	109.0W	24.2N	111.0W	0	LO	35	N	N	19910410	160320	246	100	39	79
16	7	MEXICO	SIERRA MADRE OCCIDENTAL	28.0N	108.0W	24.1N	110.7W	5	HO	35	N	N	19910410	160325	246	100	39	79
16	8	MEXICO	GULF OF CALIFORNIA	28.0N	112.0W	23.5N	108.4W	10	HO	35	N	N	19910410	160402	246	101	42	79
16	9	MEXICO	LAKE CHAPEL, FIRES	20.0N	103.0W	23.2N	107.5W	10	LO	35	N	N	19910410	160416	246	101	43	79
16	10	MEXICO	SIERRA MADRE OCCIDENTAL	26.0N	109.0W	22.8N	106.3W	10	HO	35	N	N	19910410	160436	246	101	44	79
16	11	MEXICO	CENTRAL MEXICAN PLATEAU	29.0N	106.0W	22.5N	105.2W	5	HO	35	N	N	19910410	160453	246	102	45	79
16	12	MEXICO	BAJA PEN., G. OF CALIF.	27.0N	112.0W	22.2N	104.3W	20	HO	35	N	N	19910410	160508	246	102	46	79
16	13	MEXICO	SIERRA MADRE OCCIDENTAL	23.0N	105.0W	21.5N	102.4W	20	HO	35	N	N	19910410	160539	246	102	48	79
16	14	MEXICO	SIERRA MADRE ORIENTAL	24.0N	100.0W	21.3N	101.8W	60	LO	35	N	N	19910410	160548	246	102	49	79
16	15	MEXICO	EAST MEXICAN COAST	25.0N	98.0W	20.6N	99.7W	60	HO	35	N	N	19910410	160623	246	103	51	79
16	16	MEXICO	WESTERN MEXICO	25.0N	106.0W	20.4N	99.1W	20	HO	35	N	N	19910410	160633	246	103	51	79
16	17	MEXICO	LAKE CHAPEL, VOLCANOES	21.0N	102.0W	20.0N	98.2W	0	LO	35	N	N	19910410	160649	247	103	52	79
16	18	MEXICO	MEXICO CITY, SMOG	20.0N	99.0W	19.2N	96.3W	5	LO	35	N	N	19910410	160721	247	104	54	79
16	19	MEXICO	COLIMA VOL., L. CHAPEL	19.0N	101.0W	19.1N	95.9W	10	LO	35	N	N	19910410	160727	247	104	55	79
16	20	MEXICO	SIERRA MADRE DEL SUR	17.0N	97.0W	17.0N	90.9W	20	HO	35	N	N	19910410	160854	247	104	60	79
16	21	MEXICO	YUCATAN PENINSULA	20.0N	89.0W	16.8N	90.5W	35	LO	35	N	N	19910410	160901	247	104	61	79
16	22	MEXICO	E. COAST YUCATAN PENIN.	19.0N	88.0W	16.5N	89.7W	55	LO	35	N	N	19910410	160914	247	104	62	79
16	23	MEXICO	YUCATAN PENINSULA	20.0N	88.0W	15.8N	88.3W	40	LO	35	N	N	19910410	160940	247	104	63	79
16	24	MEXICO	S. MEXICO, EL CHICHON V.	16.0N	92.0W	15.6N	87.9W	35	HO	35	N	N	19910410	160847	247	104	64	79
16	26	MEXICO	YUCATAN PENINSULA	19.0N	89.0W	14.5N	85.5W	45	HO	35	N	N	19910410	161029	247	103	66	79
71	3	MEXICO	GUADALUPE ISLAND	29.0N	118.5W	28.0N	116.7W	0	LO	250	N	N	19910405	155717	246	100	30	2
71	4	MEXICO	GUADALUPE I.-DARK FRAME	29.0N	118.5W	28.0N	116.3W	0	LO	250	N	N	19910405	155723	246	100	31	2
71	5	MEXICO	LAGUNA SALADA-SALTON SEA	32.5N	115.5W	28.2N	114.5W	0	LO	250	N	N	19910405	155750	246	101	32	2
71	19	MEXICO	BAJA-MAGDALENA BAY	24.5N	112.0W	27.5N	113.7W	10	LO	250	N	N	19910405	173717	246	121	54	3
71	20	MEXICO	BAJA-SOUTHERN TIP	23.5N	110.0W	27.4N	112.8W	10	LO	250	N	Y	19910405	173730	246	122	55	3
71	21	MEXICO	BAJA-LA PAZ BAY	24.5N	110.5W	27.4N	112.3W	10	LO	250	N	Y	19910405	173737	246	122	55	3
71	22	MEXICO	BAJA-CARMEN I., SUNGLINT	26.0N	111.0W	27.3N	112.1W	0	LO	250	N	N	19910405	173741	246	123	55	3
71	23	MEXICO	BAJA-CHIVATO POINT	27.0N	112.0W	27.3N	111.7W	0	NV	250	N	N	19910405	173746	246	123	56	3
71	24	MEXICO	BAJA-LAGUNA SAN IGNACIO	27.0N	113.0W	27.2N	111.5W	5	LO	250	N	N	19910405	173749	246	123	56	3
71	25	MEXICO	BAJA-SEBASTIAN VIZCAINO	28.0N	114.5W	27.2N	111.2W	0	LO	250	F	N	19910405	173754	246	124	56	3
71	26	MEXICO	RIO SINALOA-CANALS	26.0N	108.0W	27.1N	110.3W	5	LO	250	N	N	19910405	173807	246	124	57	3
71	27	MEXICO	MNT FIRES-SONALOMA RIVER	25.0N	106.5W	26.9N	109.2W	5	LO	250	N	Y	19910405	173824	246	126	58	3
71	28	MEXICO	MNT FIRES-LORENZO RIVER	25.0N	106.5W	26.7N	108.2W	5	LO	250	U	Y	19910405	173839	246	127	59	3
71	29	MEXICO	COAST-TACHICHTLE I.	25.0N	108.0W	26.6N	107.9W	20	LO	250	N	Y	19910405	173844	246	127	59	3

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	LONG	MADIR LAT	LONG	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
71	30	MEXICO	GUAMUCHIL, RESERVOIR	25.5N	108.0W	26.5N	106.8W	5	LO	250	N	Y	19910405	173900	246	129	60	3
71	31	MEXICO	OHVIRA BAY-FUZZY FOCUS	25.5N	109.0W	26.4N	106.5W	5	LO	250	N	Y	19910405	173904	246	129	60	3
71	32	MEXICO	LORENZO R.-RESERVOIR	24.5N	107.0W	26.2N	105.5W	5	LO	250	N	Y	19910405	173920	246	130	61	3
71	33	MEXICO	BADIRAGUATO R.-RESERVOIR	25.0N	107.0W	26.2N	105.3W	5	LO	250	N	Y	19910405	173923	246	131	61	3
71	34	MEXICO	SIERRA MADRE ORIENTAL	25.0N	100.5W	25.9N	103.8W	60	LO	250	N	Y	19910405	173946	246	133	62	3
71	35	MEXICO	BAY OF CAMPECHE	19.5N	95.5W	23.4N	94.2W	50	LO	250	N	Y	19910405	174216	245	151	70	3
71	36	MEXICO	BAY OF CAMPECHE	18.5N	94.5W	23.3N	93.9W	20	LO	250	N	Y	19910405	174220	245	151	70	3
71	37	MEXICO	B. OF CAMPECHE, FRONTERA	19.0N	92.5W	23.3N	93.7W	15	LO	250	N	Y	19910405	174224	245	152	70	3
71	38	MEXICO	B. CAMPECHE-L. DE TERMINOS	19.0N	91.5W	23.2N	93.5W	20	LO	250	N	Y	19910405	174226	245	152	71	3
71	39	MEXICO	YUCATAN P. B. OF CAMPECHE	20.0N	91.0W	23.2N	93.4W	40	LO	250	N	Y	19910405	174229	245	153	71	3
71	40	MEXICO	YUCATAN PENINSULA	21.0N	90.5W	23.1N	93.1W	60	LO	250	N	Y	19910405	174233	245	154	71	3
71	41	MEXICO	YUCATAN PENINSULA	21.5N	90.0W	23.0N	92.9W	60	LO	250	N	Y	19910405	174237	245	154	71	3
71	42	MEXICO	CHINCHORRO BANK	19.0N	87.5W	22.7N	91.8W	60	LO	250	F	N	19910405	174254	245	157	72	3
71	43	MEXICO	YUCATAN PEN.-NW TIP	21.5N	87.0W	22.4N	90.9W	25	LO	250	N	Y	19910405	174308	245	160	72	3
71	44	MEXICO	YUCATAN PEN.-NW TIP	21.5N	87.0W	22.1N	89.9W	25	LO	250	N	Y	19910405	174325	245	163	73	3
71	45	MEXICO	YUCATAN PEN.-COZUMEL	20.5N	87.0W	21.8N	89.0W	60	LO	250	N	Y	19910405	174339	245	166	73	3
71	46	MEXICO	YUCATAN PEN.-NW TIP	21.0N	87.5W	21.7N	88.7W	60	NV	250	N	Y	19910405	174344	245	167	74	3
71	47	MEXICO	YUCATAN PEN.-NORTH TIP	21.5N	88.0W	21.6N	88.5W	45	NV	250	N	Y	19910405	174347	245	168	74	3
71	48	MEXICO	YUCATAN PEN.-NORTH TIP	21.5N	88.5W	21.5N	88.2W	50	NV	250	N	Y	19910405	174352	245	169	74	3
71	49	MEXICO	CAMPECHE-YUCATAN PEN.	20.0N	90.5W	21.3N	87.5W	45	LO	250	N	Y	19910405	174404	245	171	74	3
71	50	MEXICO	YUCATAN PEN.-WESTERN PART	20.5N	90.5W	21.2N	87.4W	60	LO	250	N	Y	19910405	174406	245	172	74	3
71	51	MEXICO	MERIDA-YUCATAN PENINSULA	21.0N	89.5W	21.2N	87.3W	65	LO	250	N	Y	19910405	174408	245	172	74	3
71	52	MEXICO	YUCATAN PEN.-NE TIP	21.5N	88.0W	21.0N	86.9W	45	LO	250	N	Y	19910405	174414	245	174	75	3
71	53	MEXICO	COZUMEL-FUZZY FOCUS	20.5N	87.0W	20.9N	86.6W	20	NV	250	F	N	19910405	174419	245	175	75	3
71	60	MEXICO	ESPIRITO SANTO BAY	19.0N	88.0W	19.6N	83.1W	60	LO	250	N	Y	19910405	174517	244	190	76	3
71	61	MEXICO	YUCATAN PEN.-ASCENSION B	20.0N	87.5W	19.6N	83.0W	55	LO	250	N	Y	19910405	174519	244	191	76	3
71	77	MEXICO	BAJA-SOUTHERN TIP	23.0N	109.5W	23.5N	118.3W	5	LO	250	N	Y	19910405	191538	245	149	70	4
71	78	MEXICO	BAJA-LA PAZ BAY	24.0N	110.5W	23.4N	118.0W	5	LO	250	N	Y	19910405	191543	245	150	70	4
71	79	MEXICO	BAJA-MAGDALENA BAY	24.5N	111.5W	23.4N	117.8W	5	LO	250	N	Y	19910405	191546	245	150	70	4
71	81	MEXICO	BAJA-SAN CRISTOBAL BAY	27.0N	115.0W	22.8N	115.9W	0	LO	250	N	Y	19910405	191617	245	155	71	4
71	82	MEXICO	BAJA-LAGUNA SAN IGNACIO	26.5N	113.5W	22.7N	115.6W	5	LO	250	N	Y	19910405	191622	245	156	72	4
71	83	MEXICO	BAJA-MAGDALENA BAY	24.5N	112.0W	22.5N	115.1W	0	LO	250	N	Y	19910405	191630	245	157	72	4
71	86	MEXICO	BANDERAS BAY	20.5N	105.5W	18.1N	103.3W	55	LO	250	N	Y	19910405	191947	244	207	76	4
72	2	MEXICO	SIERRA MADRE OCC.-FIRES	22.0N	105.0W	26.5N	107.3W	15	LO	100	N	Y	19910405	173853	246	128	59	3
72	3	MEXICO	SIERRA MADRE ORIENTAL	25.5N	100.5W	25.3N	101.4W	40	LO	100	N	Y	19910405	174023	245	136	64	3
72	4	MEXICO	SIERRA MADRE ORIENTAL	24.5N	101.5W	25.2N	100.7W	10	NV	100	N	Y	19910405	174034	245	137	65	3
72	5	MEXICO	COAST-GULF OF MEXICO	23.0N	98.0W	25.0N	99.9W	65	LO	100	N	Y	19910405	174046	245	138	65	3
72	6	MEXICO	YUCATAN PEN.-COZUMEL	21.0N	87.0W	21.6N	88.5W	45	LO	100	N	Y	19910405	174348	245	167	74	3
72	7	MEXICO	YUCATAN PEN.-COZUMEL	21.5N	87.0W	21.4N	87.9W	45	LO	100	N	Y	19910405	174358	245	169	74	3
72	8	MEXICO	YUCATAN P.-COZUMEL-BRIGHT	21.5N	87.0W	21.2N	87.3W	45	NV	100	N	Y	19910405	174407	245	171	74	3

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		NADIR		CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN	EL	OR
				LAT	LONG	LAT	LONG												
72	9	MEXICO	TURNER ISLANDS	17.0N	87.5W	20.1N	84.4W	50	LO	100	N	N	19910405	17455	245	183	75	3	
72	33	MEXICO	BAJA-SANTA ROSALIA BAY	28.5N	114.0W	24.1N	120.3W	10	HO	100	N	N	19910405	19150	245	144	68	4	
72	34	MEXICO	SIERRA MADRE OCCID.-BAJA			23.3N	117.6W	20	HO	100	N	N	19910405	19154	245	150	70	4	
72	35	MEXICO	COAST-SIERRA MADRE OCCID	21.5N	104.5W	20.6N	109.7W	45	HO	100	N	Y	19910405	19175	245	175	75	4	
72	36	MEXICO	MEXICAN PLATEAU			20.2N	108.5W	25	HO	100	N	N	19910405	19181	245	180	75	4	
72	37	MEXICO	COAST-SIERRAMADRE DELSUR	17.0N	99.0W	18.9N	105.3W	20	LO	100	N	N	19910405	19191	244	195	76	4	
75	40	MEXICO	LAKE CHAPALA, SMOKE PLUMS			26.1N	103.3W	60	HO	250	N	N	19910406	13422	246	89	13	16	
75	41	MEXICO	LAKE CHAPALA, SMOKE PLUMS			26.3N	102.5W	80	HO	250	N	N	19910406	13423	246	89	14	16	
75	72	MEXICO	BAJA CALIFORNIA			28.3N	109.8W	40	HO	250	N	N	19910406	15200	246	98	29	17	
75	73	MEXICO	WEST OF CHIHUAHUA			28.4N	108.4W	0	LO	250	N	N	19910406	15205	246	99	30	17	
75	74	MEXICO	WEST OF CHIHUAHUA			28.4N	107.7W	10	HO	250	N	N	19910406	15203	246	100	30	17	
75	75	MEXICO	WEST OF CHIHUAHUA			28.5N	107.0W	0	LO	250	N	N	19910406	15204	246	100	31	17	
75	76	MEXICO	NW MEXICO			28.5N	106.5W	20	HO	250	N	N	19910406	15205	246	100	32	17	
75	77	MEXICO	ORB. TAIL, BAJA CALIFORNIA			28.5N	105.7W	30	HO	250	N	N	19910406	15210	246	101	32	17	
75	78	MEXICO	ORB. TAIL, BAJA CALIFORNIA			28.5N	104.2W	20	HO	250	N	N	19910406	15212	246	102	34	17	
75	88	MEXICO	IS. WAKES, BAJA CALIF.			28.4N	122.4W	80	LO	250	N	N	19910406	16561	246	105	38	18	
75	90	MEXICO	BAJA CA., VIZCAINO DESERT	28.0N	113.0W	28.1N	116.9W	20	LO	250	N	N	19910406	16573	246	109	43	18	
75	91	MEXICO	YUCATAN, NE TIP	20.0N	86.0W	21.0N	84.8W	70	LO	250	N	N	19910406	17055	245	147	73	18	
76	77	MEXICO	SMOKE VALLEYS S. MEXICO			17.6N	94.4W	50	LO	250	N	N	19910409	16462	245	110	64	64	
76	78	MEXICO	PRESA DE LA ANGOSTURA	16.2N	92.0W	17.4N	94.0W	30	LO	250	N	N	19910409	16463	245	111	65	64	
78	6	MEXICO	COLORADO RIVER DELTA	32.5N	115.0W	28.1N	111.9W	0	LO	250	N	N	19910409	15020	244	94	23	63	
78	7	MEXICO	GRAND DESERT, PIMACATES	31.5N	113.5W	28.1N	111.6W	0	LO	250	N	N	19910409	15020	244	94	24	63	
78	25	MEXICO	SIERRA MADRE ORIENTAL	25.5N	100.5W	26.3N	98.5W	15	NV	250	N	N	19910409	15052	245	100	36	63	
78	53	MEXICO	MAGDALENA BAY IN SUNGLIN	25.0N	111.5W	24.8N	115.4W	0	LO	250	N	Y	19910409	16403	246	103	43	64	
78	54	MEXICO	LA PAZ BAY IN SUNGLINT	24.0N	110.5W	24.7N	114.9W	0	LO	250	N	Y	19910409	16404	246	103	43	64	
78	55	MEXICO	LA PAZ BAY IN SUNGLINT	23.5N	110.0W	24.5N	114.4W	0	LO	250	N	Y	19910409	16405	246	103	44	64	
78	56	MEXICO	SIERRA DE LA GIGANTA	23.5N	110.0W	24.4N	114.0W	0	LO	250	N	Y	19910409	16410	246	104	44	64	
78	57	MEXICO	SIERRA DE LA GIGANTA	23.0N	109.5W	24.3N	113.5W	0	LO	250	N	Y	19910409	16410	246	104	44	64	
78	58	MEXICO	MIGUEL HIDALGO RES.	27.0N	109.0W	23.3N	110.0W	0	LO	250	N	N	19910409	16420	246	105	48	64	
78	59	MEXICO	MIGUEL HIDALGO RES.	26.5N	108.0W	23.2N	109.6W	0	LO	250	N	N	19910409	16420	246	105	48	64	
78	60	MEXICO	SIERRA MADRE OCCIDENTAL	22.5N	104.5W	22.8N	108.4W	65	LO	250	N	N	19910409	16429	246	106	50	64	
78	61	MEXICO	SIERRA MADRE OCCIDENTAL	23.0N	104.0W	22.7N	108.1W	45	LO	250	N	N	19910409	16423	246	106	50	64	
78	62	MEXICO	SMOKE PALL			21.9N	105.7W	35	HO	250	N	N	19910409	16431	246	107	52	64	
78	63	MEXICO	SMOKE PALL			21.9N	105.4W	35	HO	250	N	N	19910409	16431	246	107	53	64	
78	64	MEXICO	MALINCHE VOL., PUEBLA	19.5N	98.5W	20.1N	100.4W	5	NV	250	N	Y	19910409	16440	246	109	58	64	
78	65	MEXICO	APIZACO	19.5N	98.0W	19.9N	100.1W	15	LO	250	N	Y	19910409	16446	246	109	58	64	
78	66	MEXICO	INFIERNILLO RES., SMOKE	18.5N	102.5W	19.7N	99.5W	40	HO	250	N	N	19910409	16456	246	109	59	64	
79	1	MEXICO	GUADALUPE ISLAND	29.0N	118.5W	27.4N	119.9W	60	NV	250	N	Y	19910406	15173	246	92	19	17	
79	2	MEXICO	GUADALUPE ISLAND	29.0N	118.5W	27.4N	119.4W	60	NV	250	N	Y	19910406	15174	246	93	19	17	
79	17	MEXICO	COAST NEAR MAZATLAN	23.5N	106.5W	27.4N	110.5W	5	LO	250	N	Y	19910406	16591	246	114	49	18	

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		NADIR		CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN	EL	OR
				LAT	LONG	LAT	LONG												
79	18	MEXICO	OCCIDENTAL MTS., SMOKE	23.0N	104.5W	27.2N	109.4W	5	LO	250	N	Y	19910406	165927	246	115	50	18	
79	19	MEXICO	CHAPALA LK., GUADALAJARA	20.5N	103.5W	26.3N	104.3W	5	LO	250	N	N	19910406	170043	246	119	55	18	
79	20	MEXICO	S. MEXICAN PLATEAU	21.0N	101.0W	25.6N	100.7W	10	LO	250	N	N	19910406	170138	246	122	58	18	
79	67	MEXICO	SHIP WAKES OFF MEXICO	15.0N	96.0W	15.9N	96.2W	25	NV	250	N	N	19910406	184251	245	201	79	19	
81	1	MEXICO	PETACALCO BAY	18.0N	102.0W	16.9N	100.4W	10	NV	250	N	Y	19910405	192036	244	220	76	4	
81	2	MEXICO	TEQUILA BAY, SMOKE	17.0N	101.0W	16.5N	99.6W	10	NV	250	N	Y	19910405	192051	244	224	75	4	
81	3	MEXICO	ACAPULCO, RES PALO LAG.	16.5N	99.5W	16.4N	99.4W	0	NV	250	N	N	19910405	192054	244	224	75	4	
81	4	MEXICO	NOLENGA LAGOON	16.0N	98.0W	16.3N	99.2W	5	NV	250	N	N	19910405	192058	244	225	75	4	
81	5	MEXICO	COAST WEST OF PORT ANGEL	16.0N	97.0W	16.2N	98.9W	30	NV	250	N	Y	19910405	192102	244	226	75	4	
81	6	MEXICO	SUPERIOR, INFERIOR LAG.	16.0N	95.0W	15.3N	96.9W	15	NV	250	N	N	19910405	192139	244	235	74	4	
81	7	MEXICO	SAN DIEGO BAY	16.0N	96.0W	15.2N	96.6W	30	NV	250	N	Y	19910405	192143	244	236	74	4	
81	8	MEXICO	PORT ANGEL	16.0N	95.0W	15.0N	96.3W	20	NV	250	N	N	19910405	192149	244	237	74	4	
81	9	MEXICO	COATZACOALCOS	18.0N	94.5W	14.0N	94.3W	65	LO	250	N	N	19910405	192225	244	244	72	4	
81	10	MEXICO	ANGOSTURA RESERVOIR	16.0N	92.5W	13.9N	94.0W	50	LO	250	N	N	19910405	192230	244	245	72	4	
81	13	MEXICO	ANGOSTURA RESERVOIR	16.0N	92.0W	12.7N	91.6W	65	LO	250	N	N	19910405	192313	244	251	70	4	
83	39	MEXICO	DELICIAS, RIO CONCHOS	27.7N	104.7W	28.2N	105.7W	0	NV	100	N	N	19910409	132428	244	85	7	62	
83	40	MEXICO	DELICIAS, RIO CONCHOS, DK	27.6N	104.8W	28.3N	105.0W	0	NV	100	U	Y	19910409	132437	244	85	8	62	
83	41	MEXICO	SRA SALSIPUEDES/DE PINO	28.4N	101.8W	28.3N	104.4W	20	LO	100	N	Y	19910409	132447	244	86	9	62	
83	42	MEXICO	SRA SALSIPUEDES/ENCANTAD	28.5N	101.6W	28.4N	102.9W	25	LO	100	N	Y	19910409	132508	244	87	10	62	
83	62	MEXICO	WEST PANORAMA, BAJA, GULF	29.0N	105.5W	26.2N	97.6W	5	HO	100	N	Y	19910409	150538	245	101	37	63	
83	63	MEXICO	WEST PANORAMA, BAJA, GULF	28.0N	104.0W	26.0N	96.8W	5	HO	100	N	Y	19910409	150550	245	101	38	63	
83	65	MEXICO	NO. PLATEAU, SRA MADRE MTN	26.1N	101.2W	25.8N	95.9W	30	LO	100	N	N	19910409	150604	245	101	39	63	
83	90	MEXICO	CLDS/FOG/SRA MADRE, CST	25.5N	100.5W	19.2N	98.2W	85	HO	100	N	N	19910409	164517	246	109	61	64	
83	91	MEXICO	YUCATAN PEN, LAG. TERMINOS	18.5N	89.5W	18.9N	97.6W	50	HO	100	N	N	19910409	164528	246	110	61	64	
83	92	MEXICO	NW PAN, CLDS/FOG/SRA MADR	28.0N	103.0W	18.6N	96.6W	90	HO	100	N	N	19910409	164544	245	110	62	64	
85	1	MEXICO	S.MEX., OAXACA AREA	17.0N	97.4W	17.7N	96.7W	0	LO	250	N	N	19910408	172501	247	122	71	49	
85	2	MEXICO	S.MEX., OAXACA AREA	16.3N	96.7W	17.6N	96.4W	0	LO	250	N	N	19910408	172506	247	122	71	49	
85	3	MEXICO	COAST, SSE OAXACA AREA	16.2N	96.3W	17.4N	95.8W	10	LO	250	N	N	19910408	172515	247	122	72	49	
85	4	MEXICO	COAST, W. OF PUERTO ESCONO	16.2N	97.5W	17.1N	95.3W	10	LO	250	N	N	19910408	172525	247	123	72	49	
85	5	MEXICO	MAR MUERTO	16.0N	94.0W	16.9N	94.8W	10	LO	250	N	N	19910408	172534	247	123	73	49	
85	6	MEXICO	HEADWATER, RIO ENCAJONADO	16.7N	94.2W	16.5N	93.7W	0	LO	250	N	N	19910408	172552	247	125	74	49	
85	7	MEXICO	PRESA DE LA ANGOSTURA	16.0N	92.5W	16.2N	93.2W	10	LO	250	N	N	19910408	172602	247	125	75	49	
85	8	MEXICO	S.MEX., INLAND			15.6N	91.9W	40	LO	250	N	N	19910408	172624	246	127	76	49	
86	96	MEXICO	MONTERREY AREA	25.8N	100.4W	28.5N	98.5W	10	LO	250	N	N	19910408	140514	247	94	22	47	
86	97	MEXICO	AREA E. OF MONTERREY	25.8N	99.7W	28.5N	97.2W	70	LO	250	N	N	19910408	140533	247	95	24	47	
86	98	MEXICO	AREA E. OF MONTERREY			28.5N	95.7W	95	LO	250	N	N	19910408	140555	247	95	25	47	
86	99	MEXICO	AREA N. OF MONTERREY			28.4N	95.3W	70	LO	250	N	N	19910408	140601	247	96	25	47	
86	108	MEXICO	SO. TIP BAJA	23.5N	110.0W	22.7N	109.9W	0	LO	250	N	N	19910408	172120	247	113	57	49	
86	109	MEXICO	SO. BAJA	23.8N	110.2W	22.6N	109.6W	0	LO	250	N	N	19910408	172125	247	113	57	49	
90	101	MEXICO	GUADALAJARA, LAG. CHAPALA	21.0N	103.0W	26.4N	104.5W	0	LO	250	U	N	19910406	170040	246	119	55	18	

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADIR LAT LON	CC	IL	FL	E	S	DATE	GMT	AL	SUN EL	OR
90	102	MEXICO	TORREON, RDS, RR, AGR.	25.5N 103.5W	26.1N 103.0W	25	LO	250	N	N	19910406	170103	246	120	56 18
90	103	MEXICO	SIERRA MADRE, AGR.	26.5N 102.5W	25.9N 102.0W	40	LO	250	N	N	19910406	170119	246	121	57 18
90	104	MEXICO	GUADALAJARA, LAG. CHAPALA	21.0N 103.0W	25.7N 101.0W	0	LO	250	U	N	19910406	170134	246	122	58 18
90	105	MEXICO	YUCATAN COAST	21.5N 88.0W	22.3N 88.6W	30	LO	250	N	N	19910406	170449	246	139	69 18
90	106	MEXICO	YUCATAN CST, COZUMEL I.	20.5N 87.0W	21.4N 85.9W	60	LO	250	N	N	19910406	170533	245	144	72 18
91	2	MEXICO	BAJA, SO. END, SRA GIGANTA	23.3N 109.9W	20.8N 110.1W	10	LO	250	U	N	19910405	191752	245	175	75 4
91	3	MEXICO	COAST	18.2N 103.2W	19.1N 105.5W	20	LO	250	M	Y	19910405	191908	244	195	76 4
91	4	MEXICO	COAST	18.5N 103.5W	19.0N 105.4W	60	LO	250	N	Y	19910405	191910	244	196	76 4
91	5	MEXICO	COAST	19.0N 104.0W	18.9N 105.3W	80	LO	250	N	Y	19910405	191913	244	197	76 4
91	6	MEXICO	COAST, MANZANILLO BAY	19.0N 104.5W	18.9N 105.1W	80	LO	250	N	Y	19910405	191915	244	197	76 4
91	7	MEXICO	COAST, SRA MADRE OCCID.	19.5N 104.5W	18.8N 104.9W	90	LO	250	N	Y	19910405	191919	244	198	76 4
91	8	MEXICO	PUNTA MITA, COAST	12.5N 105.5W	18.6N 104.5W	20	LO	250	N	Y	19910405	191926	244	200	76 4
91	9	MEXICO	SANTIAGO/ACAPONETA BASIN	22.0N 105.5W	18.6N 104.3W	5	LO	250	N	Y	19910405	191929	244	201	76 4
91	10	MEXICO	COAST, SHEAR LINE	17.0N 101.0W	16.6N 99.7W	10	LO	250	N	N	19910405	192049	244	224	75 4
91	11	MEXICO	LAG. TRES PALO, AFLD, SHEAR	16.5N 99.5W	16.5N 99.5W	5	LO	250	N	N	19910405	192052	244	224	75 4
91	12	MEXICO	LAG. CHICAHUA, COAST	15.6N 97.7W	16.4N 99.3W	0	LO	250	U	N	19910405	192056	244	225	75 4
91	13	MEXICO	RIO COLOTEPEC, AFLD, CST.	15.5N 97.0W	16.3N 99.1W	0	LO	250	U	N	19910405	192100	244	228	75 4
91	14	MEXICO	LAG. SUPERIOR/INFERIOR	16.0N 94.5W	15.3N 97.0W	5	LO	250	N	N	19910405	192137	244	235	74 4
91	15	MEXICO	SRA MADRE DEL SUR, CST.	15.5N 95.5W	15.2N 96.7W	25	LO	250	N	N	19910405	192141	244	236	74 4
91	16	MEXICO	RIO COLOTEPEC, COAST	15.5N 96.5W	15.1N 96.4W	10	LO	250	N	N	19910405	192147	244	237	74 4
91	17	MEXICO	MALPASO RESERVOIR	17.0N 93.5W	14.1N 94.4W	85	LO	250	N	N	19910405	192223	244	244	72 4
91	18	MEXICO	ANGOSTURA RESERVOIR	16.0N 92.5W	13.9N 94.1W	70	LO	250	N	N	19910405	192228	244	245	72 4
92	3	MEXICO	S. COAST, BAHIA DULCE AREA	16.7N 99.0W	17.1N 99.0W	40	LO	250	N	N	19910406	184202	245	184	79 18
92	107	MEXICO	SMOKE PLUMES, DARK FRAME	15.4N 93.3W	15.4N 93.3W	70	LO	250	N	N	19910407	180438	245	162	81 34
94	14	MEXICO	CAPE CORRIENTES	20.0N 105.5W		0	LO	100	N	N					
94	15	MEXICO	COAST, ANGOSTUTURA RES.	14.5N 92.5W		35	LO	100	N	Y					
96	50	MEXICO	SIERRA MADRE DEL SUR	21.0N 101.0W		40	LO	100	N	N					
98	82	MEXICO	CIUDAD OBREGON	27.8N 109.9W	27.4N 108.6W	0	LO	250	N	N	19910407	162041	246	107	43 33
98	85	MEXICO	NW. OF CHIHUAHUA	26.9N 105.6W	26.9N 105.6W	0	LO	250	N	N	19910407	162125	246	109	46 33
98	86	MEXICO	CHIHUAHUA	28.5N 105.6W	26.9N 105.3W	0	LO	250	N	N	19910407	162130	246	110	46 33
98	87	MEXICO	MONTERREY	25.3N 104.4W	25.8N 99.6W	5	LO	250	N	N	19910407	162256	246	113	52 33
99	80	MEXICO	GRO DEPLOY - SO. CA/MEX	28.2N 110.1W	28.2N 110.1W	30	HO	40	N	N	19910407	144104	246	93	20 32
99	81	MEXICO	GRO DEPLOY - SO. CA/MEX	28.3N 109.2W	28.3N 109.2W	20	HO	40	N	N	19910407	144117	246	93	21 32
99	82	MEXICO	GRO DEPLOY - SO. CA/MEX	28.3N 108.0W	28.3N 108.0W	10	HO	40	N	N	19910407	144135	246	94	22 32
99	83	MEXICO	GRO DEPLOY - MEX	28.5N 103.6W	28.5N 103.6W	10	HO	40	N	N	19910407	144239	246	96	26 32
99	84	MEXICO	GRO DEPLOY - MEX	28.5N 101.9W	28.5N 101.9W	10	HO	40	N	N	19910407	144303	246	97	27 32
151	2	MEXICO	SOCORRO, SAN BENEDICTO I.	19.0N 111.0W	20.0N 108.0W	10	LO	250	N	Y	19910405	191827	245	183	76 4
151	3	MEXICO	PUNTA MITA, BANDERAS BAY	20.5N 105.5W	19.2N 105.8W	45	LO	250	N	Y	19910405	191903	245	193	76 4
151	4	MEXICO	SAN BLAS, COASTLINE	21.5N 105.0W	18.9N 105.3W	15	LO	250	N	Y	19910405	191913	244	196	76 4
151	5	MEXICO	SIERRA MADRE OCCIDENTAL	21.0N 103.5W	18.8N 104.9W	20	LO	250	N	Y	19910405	191919	244	198	76 4

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
151	6	MEXICO	INFIERNILLO RESERVOIR	18.5N 102.5W	18.4N 103.8W	20	LO	250	N	N	19910405	191937	244	203	76	4
151	7	MEXICO	SIERRA MADRE DEL SUR	17.0N 99.0W	17.8N 102.5W	10	LO	250	N	Y	19910405	192000	244	210	76	4
151	8	MEXICO	DULCE BAY	16.5N 99.0W	17.5N 101.8W	15	LO	250	N	Y	19910405	192013	244	213	76	4
151	9	MEXICO	POPOCATEPETL VOLCANO	18.5N 98.5W	16.6N 99.7W	15	LO	250	N	Y	19910405	192048	244	223	75	4
151	10	MEXICO	SIERRA DEL SUR-FIRES	17.0N 100.0W	16.4N 99.3W	10	NV	250	N	Y	19910405	192056	244	225	75	4
151	11	MEXICO	GULF OF TEHUANTEPEC	16.0N 95.0W	15.0N 96.3W	25	LO	250	N	N	19910405	192149	244	237	74	4
151	12	MEXICO	SIERRA DE SOCONUSCO	15.5N 92.0W	13.5N 93.3W	40	LO	250	N	N	19910405	192243	244	247	71	4
152	62	MEXICO	RIO FUERTE, LA MOCHIS	26.0N 109.0W	27.0N 108.0W	5	LO	250	N	N	19910406	165948	246	116	51	18
152	63	MEXICO	SIERRA MADRE OCCIDENTAL	26.0N 106.5W	26.6N 105.8W	30	LO	250	N	N	19910406	170021	246	118	53	18
152	64	MEXICO	TORREON	25.0N 103.5W	26.4N 104.4W	35	LO	250	N	Y	19910406	170042	246	119	55	18
152	65	MEXICO	NEAR TORREON	24.5N 103.5W	26.1N 102.8W	25	LO	250	N	Y	19910406	170106	246	121	56	18
152	66	MEXICO	CLOUDS		25.4N 100.0W	95	LO	250	N	N	19910406	170149	246	123	59	18
153	1	MEXICO	BANDERAS BAY, INT. WAVES	20.5N 105.5W	21.4N 106.0W	10	LO	250	N	N	19910408	172224	247	115	61	49
153	3	MEXICO	CITY OF OAXACA	18.5N 97.5W	18.0N 97.2W	5	NV	250	N	N	19910408	172452	247	121	70	49
153	24	MEXICO	SIERRA MADRE ORIENTAL	25.5N 99.5W	26.1N 97.1W	65	NV	250	N	N	19910409	150546	245	101	38	63
153	25	MEXICO	SIERRA MADRE ORIENTAL	26.5N 100.0W		70	LO	250	N	Y						
153	26	MEXICO	SIERRA MADRE ORIENTAL	28.0N 103.0W	26.0N 96.6W	35	LO	250	N	Y	19910409	150553	245	101	38	63
153	28	MEXICO	MEXICAN PLATEAU	28.0N 103.0W	25.9N 96.1W	45	LO	250	N	Y	19910409	150601	245	101	39	63
153	29	MEXICO	NEAR BROWNSVILLE	26.0N 97.0W		55	LO	250	N	N						
12	35	MOROCCO	ANTI ATLAS MTNS.	29.0N 9.0W	27.2N 5.6W	35	HO	35	N	N	19910410	081223	245	95	28	74
42	1	MOROCCO	W. LOOKING VIEW ATLAS M.	30.0N 8.0W	28.4N 15.8W	15	HO	35	N	N	19910411	073138	243	86	10	89
42	2	MOROCCO	ANTI-ATLAS MTNS.	30.0N 7.0W	28.2N 12.8W	15	LO	35	N	N	19910411	073221	244	87	13	89
42	3	MOROCCO	ANTI-ATLAS MTNS.	31.0N 6.0W	28.2N 12.3W	10	LO	35	N	N	19910411	073229	244	88	13	89
42	4	MOROCCO	HIGH ATLAS MTNS.	31.0N 7.0W	28.0N 9.7W	5	LO	35	N	N	19910411	073307	244	89	15	89
42	5	MOROCCO	HIGH ATLAS MTNS.	32.0N 6.0W	27.9N 8.8W	15	LO	35	N	N	19910411	073320	244	89	16	89
42	6	MOROCCO	HIGH ATLAS MTNS.	31.0N 8.0W	27.8N 8.4W	0	LO	35	N	N	19910411	073326	244	89	17	89
42	7	MOROCCO	ANTI-ATLAS MTNS.	31.0N 7.0W	27.8N 7.9W	5	LO	35	N	N	19910411	073334	244	90	17	89
42	8	MOROCCO	TELL ATLAS MTNS.	35.0N 5.0W	27.7N 7.3W	35	HO	35	N	N	19910411	073342	244	90	18	89
90	28	MOROCCO	SEBKHA TAN, COAST	27.8N 12.7W	26.7N 10.7W	5	LO	250	N	N	19910406	104630	246	120	55	14
93	48	MOROCCO	ANTI-ATLAS, OUARKZIZ MTN	28.5N 10.0W	28.5N 8.4W	10	NV	250	N	N	19910406	090746	247	103	36	13
93	49	MOROCCO	ANTI-ATLAS, OUARKZIZ MTN	29.0N 9.0W	28.5N 7.9W	0	NV	250	N	Y	19910406	090754	247	104	36	13
93	50	MOROCCO	ANTI-ATLAS, OUARKZIZ MTS	29.5N 8.5W	28.5N 7.7W	0	NV	250	N	Y	19910406	090756	247	104	36	13
93	51	MOROCCO	ANTI-ATLAS MTNS.	30.0N 9.0W	28.5N 6.7W	10	LO	250	N	N	19910406	090811	247	104	37	13
93	52	MOROCCO	ANTI-ATLAS MTNS.	30.0N 8.5W	28.5N 6.5W	10	LO	250	N	Y	19910406	090814	247	105	37	13
93	53	MOROCCO	ANTI-ATLAS MTNS., SOUS R	30.5N 8.5W	28.5N 6.4W	0	LO	250	N	Y	19910406	090816	247	105	37	13
93	54	MOROCCO	ANTI-ATLAS MTNS.	30.0N 8.0W	28.5N 6.2W	0	LO	250	N	Y	19910406	090818	247	105	38	13
93	55	MOROCCO	ANTI-ATLAS MTNS.	29.0N 8.0W	28.5N 6.0W	0	NV	250	N	Y	19910406	090821	247	105	38	13
93	57	MOROCCO	HIGH ATLAS MTNS.	31.0N 8.0W	28.5N 4.6W	5	LO	250	N	N	19910406	090841	247	106	39	13
93	58	MOROCCO	HIGH ATLAS MTNS.	31.5N 7.5W	28.5N 4.5W	5	LO	250	N	Y	19910406	090843	247	106	39	13
93	59	MOROCCO	HIGH ATLAS MTNS.	31.5N 6.0W	28.5N 4.3W	5	LO	250	N	Y	19910406	090846	247	106	39	13



TABLE 4.4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL	OR
93	60	MOROCCO	HIGH ATLAS MTHS.	31.0N 6.5W	28.5N 4.0W	5	LO	250	N	Y	19910406	090851	247	106	40	13
93	61	MOROCCO	HIGH ATLAS MTHS.	31.0N 5.0W	28.4N 3.7W	0	LO	250	N	Y	19910406	090855	247	107	40	13
93	64	MOROCCO	PLANTATIONS NEAR ZAGORA	30.5N 6.0W	28.4N 3.1W	0	LO	250	N	Y	19910406	090904	247	107	40	13
94	89	MOROCCO	ATLAS, QUARKIZ MTHS.	29.0N 9.0W		15	LO	100	N	N						
95	17	MOROCCO	ANTI ATLAS MTHS.	30.5N 8.8W	27.2N 13.7W	10	LO	250	N	N	19910406	104546	246	117	52	14
95	18	MOROCCO	STRAIT OF GIBRALTAR	36.0N 5.5W	26.9N 12.2W	0	HO	250	N	N	19910406	104608	246	118	53	14
95	19	MOROCCO	NORTHEAST MOROCCO	35.2N 4.1W	26.9N 11.8W	0	HO	250	N	N	19910406	104614	246	119	54	14
95	20	MOROCCO	NORTHEAST MOROCCO	34.5N 3.0W	26.8N 11.5W	10	HO	250	N	N	19910406	104619	246	119	54	14
95	21	MOROCCO	NORTHEAST MOROCCO	33.5N 2.0W	26.7N 11.0W	20	HO	250	N	N	19910406	104626	246	120	54	14
98	39	MOROCCO	SW. MOROCCO		27.2N 12.0W	20	LO	250	N	N	19910407	100715	246	110	46	29
15	14	MOZAMBIQUE	OVEREXPOSED		20.2S 27.6E		HO	35	O	N	19910410	132340	246	296	35	77
15	17	MOZAMBIQUE	LIMPOPO RIVER	22.0S 33.0E	20.9S 29.6E	5	LO	35	N	N	19910410	132414	246	295	33	77
15	18	MOZAMBIQUE	LOURENCO MARQUES BAY	26.0S 33.0E	21.4S 31.0E	25	HO	35	N	N	19910410	132437	246	294	31	77
15	22	MOZAMBIQUE	BAZARUTO IS., SAVE RIVER	21.0S 35.0E	22.9S 35.6E	35	LO	35	N	N	19910410	132551	246	292	27	77
15	23	MOZAMBIQUE	BAZARUTO IS., SAVE RIVER	22.0S 35.0E	23.0S 35.9E	25	LO	35	N	N	19910410	132556	246	292	26	77
15	24	MOZAMBIQUE	POELELA LAKE, COAST	25.0S 35.0E	23.8S 38.5E	25	LO	35	N	N	19910410	132637	245	291	24	77
74	4	MOZAMBIQUE			16.2S 40.6E	60	LO	250	N	N	19910409	122547	245	294	41	61
74	5	MOZAMBIQUE	COASTLINE, SEDIMENT		17.0S 42.3E	70	LO	250	N	N	19910409	122617	245	294	39	61
74	6	MOZAMBIQUE	COASTLINE, SEDIMENT		17.3S 42.9E	70	LO	250	N	N	19910409	122627	245	293	39	61
74	7	MOZAMBIQUE	COASTLINE, SEDIMENT		17.8S 44.1E	70	LO	250	N	N	19910409	122648	245	293	37	61
74	8	MOZAMBIQUE	BELO SUR TSIRIBIHINA	19.6S 44.6E	19.7S 48.8E	70	LO	250	N	N	19910409	122808	245	292	32	61
74	9	MOZAMBIQUE	TSIRIBIHINA RIVER	19.5S 45.3E	19.8S 49.1E	70	LO	250	N	N	19910409	122813	245	291	32	61
74	10	MOZAMBIQUE	TSIRIBIHINA RIVER	19.7S 45.3E	19.9S 49.5E	70	LO	250	N	N	19910409	122820	245	291	31	61
74	93	MOZAMBIQUE	BORDER AREA, ZIMBABWE		23.4S 36.1E	0	LO	250	N	N	19910409	140435	244	288	21	62
74	94	MOZAMBIQUE	BORDER AREA, ZIMBABWE		23.5S 36.4E	5	LO	250	N	N	19910409	140440	244	288	20	62
74	95	MOZAMBIQUE			24.1S 38.4E	0	HO	250	N	N	19910409	140511	244	287	18	62
74	96	MOZAMBIQUE	COASTAL AREA		24.1S 38.6E	0	LO	250	N	N	19910409	140515	244	287	18	62
74	97	MOZAMBIQUE	COASTAL AREA		24.2S 39.0E	0	HO	250	N	N	19910409	140521	244	287	18	62
75	33	MOZAMBIQUE	HIGH OBLIQUE, VRY CLOUDY		8.7S 43.8E	95	HO	250	N	N	19910406	124301	242	283	34	15
75	34	MOZAMBIQUE	HIGH OBLIQUE, VRY CLOUDY		9.0S 44.3E	95	HO	250	N	N	19910406	124311	242	283	33	15
75	58	MOZAMBIQUE	ZAMBESI R., MEGA FAN		13.7S 29.4E	60	HO	250	N	N	19910406	141921	242	283	23	16
75	59	MOZAMBIQUE	ZAMBESI R., MEGA FAN		13.8S 29.8E	60	HO	250	N	N	19910406	141927	242	283	23	16
75	60	MOZAMBIQUE	ZAMBESI R., MEGA FAN		14.1S 30.3E	60	HO	250	N	N	19910406	141936	242	283	22	16
75	61	MOZAMBIQUE			14.8S 31.8E	60	LO	250	N	N	19910406	142003	242	283	21	16
75	63	MOZAMBIQUE			15.4S 33.0E	60	LO	250	N	N	19910406	142024	242	282	19	16
75	64	MOZAMBIQUE	COAST		15.7S 33.7E	50	HO	250	N	N	19910406	142038	242	282	18	16
75	65	MOZAMBIQUE	COAST, SAVE & PUNGUE RVS.	20.2S 34.2E	15.9S 34.2E	0	LO	250	N	N	19910406	142046	242	282	18	16
75	66	MOZAMBIQUE	COAST, MEGA FANS	21.2S 35.5E	16.6S 35.7E	0	LO	250	N	N	19910406	142112	242	282	16	16
75	67	MOZAMBIQUE	PUNGUE RV. DELTA	20.0S 36.0E	17.3S 37.2E	0	LO	250	N	N	19910406	142138	242	281	15	16
77	105	MOZAMBIQUE	MOUNTAINOUS, HAZY		14.7S 31.5E	20	LO	250	N	N	19910406	141958	242	283	21	16

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		NADIR		CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN	EL	OR
				LAT	LONG	LAT	LONG												
87	48	MOZAMBIQUE	COAST, RIVER EFFLUENT	17.8S	37.4E	16.1S	40.3E	80	LO	250	N	N	19910409	122541	245	293	38	61	
87	49	MOZAMBIQUE	COAST, ATOLLS	17.3S	38.5E	16.2S	40.4E	60	LO	250	N	N	19910409	122544	245	293	38	61	
87	50	MOZAMBIQUE	COAST, ATOLLS	17.2S	39.2E	16.3S	40.7E	60	LO	250	N	N	19910409	122549	245	293	38	61	
87	51	MOZAMBIQUE	COAST, ATOLLS	16.8S	39.5E	16.4S	40.9E	70	LO	250	N	N	19910409	122553	245	293	37	61	
87	118	MOZAMBIQUE	VERY DARK	22.6S	33.3E	22.6S	33.3E	10	LO	250	N	N	19910409	140350	244	288	20	62	
87	119	MOZAMBIQUE	COAST, SE PANORAMA, DARK	22.8S	33.9E	22.8S	33.9E	10	HO	250	N	N	19910409	140400	244	287	20	62	
87	120	MOZAMBIQUE	COAST, VERY DARK	23.9S	37.6E	23.9S	37.6E	0	LO	250	N	N	19910409	140459	244	286	18	62	
90	78	MOZAMBIQUE	DRAINAGE BASIN, DARK	15.2S	32.7E	15.2S	32.7E	75	LO	250	N	N	19910406	142019	242	282	20	16	
90	81	MOZAMBIQUE	ZAMBEZI RIVER, VERY DARK	18.0S	35.5E	16.9S	36.4E	20	LO	250	N	N	19910406	142124	242	282	16	16	
90	82	MOZAMBIQUE	ZAMBEZI R, CST, VERY DARK	18.5S	36.5E	17.2S	36.9E	5	LO	250	N	N	19910406	142134	242	281	15	16	
90	83	MOZAMBIQUE	VERY DARK	17.4S	37.5E	17.4S	37.5E	10	LO	250	N	N	19910406	142143	242	281	14	16	
90	84	MOZAMBIQUE	COAST, VERY DARK	17.0S	38.5E	17.6S	38.0E	15	LO	250	N	N	19910406	142152	242	281	14	16	
90	85	MOZAMBIQUE	RIO MELULI, COAST, V. DARK	16.3S	39.6E	17.9S	38.6E	15	LO	250	N	N	19910406	142202	242	281	13	16	
90	86	MOZAMBIQUE	ZAMBEZI R/DELTA, COAST	18.5S	35.5E	18.3S	39.7E	10	LO	250	N	N	19910406	142221	242	281	12	16	
90	87	MOZAMBIQUE	RIO PUNGUE R/DELTA, CST.	19.5S	35.0E	18.4S	40.0E	5	LO	250	N	N	19910406	142226	242	281	12	16	
152	39	MOZAMBIQUE	CABO DEGADO, COAST	11.0S	41.0E	7.6S	41.7E	60	LO	250	N	N	19910406	124221	242	283	36	15	
152	40	MOZAMBIQUE	CABO DEGADO, COAST	11.0S	40.0E	8.2S	42.8E	65	LO	250	N	N	19910406	124242	242	283	35	15	
152	59	MOZAMBIQUE	RIO SAVE	22.0S	33.5E	16.4S	35.3E	40	LO	250	N	N	19910406	142105	242	282	17	16	
152	60	MOZAMBIQUE	RIO SAVE - COAST - HAZE	21.0S	34.0E	17.2S	37.0E	40	LO	250	N	N	19910406	142135	242	281	15	16	
152	61	MOZAMBIQUE	ZAMBEZI RIVER DELTA	19.0S	36.0E	17.7S	38.2E	5	LO	250	N	N	19910406	142155	242	281	14	16	
46	2	MOZAMBIQUE CHANNEL	SULOY, CURRENT BOUND, SGLT	4.0S	44.8E	4.0S	44.8E	40	LO	35	N	N	19910411	092909	249	331	76	90	
46	3	MOZAMBIQUE CHANNEL	SULOY, CURRENT BOUND, SGLT	4.1S	45.0E	4.1S	45.0E	30	LO	35	N	N	19910411	092912	249	331	76	90	
46	4	MOZAMBIQUE CHANNEL	SULOY, CURRENT BOUND, SGLT	4.3S	45.2E	4.3S	45.2E	30	LO	35	N	N	19910411	092917	249	330	76	90	
46	5	MOZAMBIQUE CHANNEL	SULOY, CURRENT BOUND, SGLT	4.4S	45.4E	4.4S	45.4E	40	LO	35	N	N	19910411	092921	249	329	75	90	
46	6	MOZAMBIQUE CHANNEL	SULOY, CURRENT BOUND, SGLT	4.6S	45.7E	4.6S	45.7E	30	LO	35	N	N	19910411	092927	249	329	75	90	
46	7	MOZAMBIQUE CHANNEL	SULOY, CURRENT BOUND, SGLT	4.7S	46.0E	4.7S	46.0E	40	LO	35	N	N	19910411	092932	249	328	75	90	
46	8	MOZAMBIQUE CHANNEL	SULOY, CURRENT BOUND, SGLT	4.9S	46.2E	4.9S	46.2E	30	LO	35	N	N	19910411	092936	249	327	75	90	
46	9	MOZAMBIQUE CHANNEL	SULOY, CURRENT BOUND, SGLT	5.0S	46.4E	5.0S	46.4E	30	LO	35	N	N	19910411	092940	249	327	74	90	
15	3	NAMIBIA	NAMIB DESERT	24.0S	15.0E	16.3S	18.4E	5	HO	35	N	N	19910410	132102	247	300	45	77	
15	4	NAMIBIA	WESTERN KALAHARI DESERT	22.0S	19.0E	16.4S	18.6E	0	LO	35	N	N	19910410	132105	247	300	45	77	
15	6	NAMIBIA	NAMIB DES., KARAS MTNS.	27.0S	18.0E	16.8S	19.6E	5	HO	35	N	N	19910410	132123	247	299	44	77	
15	9	NAMIBIA	ETOSHA PAN, NW KALAHARI	20.0S	18.0E	18.7S	24.0E	0	HO	35	N	N	19910410	132239	246	297	39	77	
15	10	NAMIBIA	CAPRIVI STRIP	18.0S	24.0E	19.0S	24.8E	0	LO	35	N	N	19910410	132252	246	297	38	77	
15	33	NAMIBIA	BRANDBERG STRUCTURE	21.0S	14.0E	23.7S	14.2E	0	LO	35	N	N	19910410	145959	246	291	25	78	
15	34	NAMIBIA	BRANDBERG STRUCTURE	21.0S	15.0E	24.0S	15.3E	0	LO	35	N	N	19910410	150017	246	291	23	78	
15	35	NAMIBIA	NAMIB DESERT	22.0S	15.0E	24.1S	15.6E	0	LO	35	N	N	19910410	150021	245	291	23	78	
15	36	NAMIBIA	NAMIB DESERT	24.0S	16.0E	24.2S	16.1E	0	LO	35	N	N	19910410	150030	245	290	23	78	
15	37	NAMIBIA	NAMIB DESERT	25.0S	15.0E	24.4S	16.8E	0	LO	35	N	N	19910410	150041	245	290	22	78	
74	55	NAMIBIA	BORDER WITH ANGOLA	17.6S	12.2E	13.9S	11.8E	0	LO	250	N	N	19910409	135743	245	296	47	62	
74	56	NAMIBIA	BORDER WITH ANGOLA	18.3S	12.3E	14.0S	12.0E	0	LO	250	N	N	19910409	135747	245	296	47	62	

TABLE 4.4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		NADIR		CC	TL	FL	E	S	DATE	GMT	AL	AZ	EL	SUN
				LAT	LONG	LAT	LONG											
74	57	NAMIBIA	SKELTON COAST	18.7S	12.8E	14.1S	12.1E	0	HO	250	N	N	19910409	135749	245	296	47	62
74	62	NAMIBIA	ETOSHA PAN AREA	17.6S	15.7E	15.7S	15.9E	0	LO	250	N	N	19910409	135851	244	295	43	62
74	63	NAMIBIA	ETOSHA PAN AREA	17.8S	16.2E	15.8S	15.7E	0	LO	250	N	N	19910409	135853	244	295	43	62
75	80	NAMIBIA	HAZY, OVER EXPOSED			14.4S	7.0E	70	HO	250	N	N	19910406	155313	243	283	22	17
75	81	NAMIBIA	ETOSHA PAN AREA	18.8S	16.5E	17.2S	13.1E	60	LO	250	N	N	19910406	155500	243	282	15	17
75	82	NAMIBIA	ETOSHA PAN AREA	18.8S	16.5E	17.3S	13.4E	60	LO	250	N	N	19910406	155505	243	282	15	17
75	83	NAMIBIA	CLDY. HAZY			18.4S	16.0E	60	LO	250	N	N	19910406	155560	243	281	12	17
75	84	NAMIBIA	CLDY. HAZY			18.8S	17.1E	60	LO	250	N	N	19910406	155609	243	280	11	17
76	48	NAMIBIA	BRANDBERG AREA	21.5S	15.0E	23.3S	11.8E	0	LO	250	N	N	19910409	153745	245	287	19	63
76	49	NAMIBIA	BORDER WITH REP. S.AFRICA	23.7S	15.0E	24.0S	14.0E	0	LO	250	N	N	19910409	153824	245	286	16	63
78	50	NAMIBIA	NAMIB DESERT	24.8S	15.5E	24.1S	14.4E	0	LO	250	N	N	19910409	153830	245	286	16	63
78	51	NAMIBIA	NAMIB DESERT	24.8S	15.8E	24.2S	14.9E	0	LO	250	N	N	19910409	153838	245	286	15	63
78	52	NAMIBIA	NAMIB DESERT	25.2S	16.0E	24.2S	15.1E	0	LO	250	N	N	19910409	153841	245	285	15	63
78	53	NAMIBIA	NAMIB DESERT	25.5S	16.0E	24.3S	15.4E	0	LO	250	N	N	19910409	153845	245	285	15	63
78	54	NAMIBIA	NAMIB DESERT	25.5S	15.5E	24.4S	15.6E	0	LO	250	N	N	19910409	153849	245	285	15	63
78	55	NAMIBIA	NAMIB DESERT	26.0S	15.5E	24.4S	15.8E	0	LO	250	N	N	19910409	153852	245	285	14	63
78	56	NAMIBIA	NAMIB DESERT	26.1S	16.0E	24.5S	16.0E	0	LO	250	N	N	19910409	153855	245	285	14	63
78	57	NAMIBIA	RUGGED MTNS E. NAMIB DSRT	25.5S	16.5E	24.5S	16.2E	0	LO	250	N	N	19910409	153858	245	285	14	63
78	58	NAMIBIA	RUGGED MTNS E. NAMIB DSRT	25.8S	16.8E	24.6S	16.4E	0	LO	250	N	N	19910409	153902	245	285	14	63
78	59	NAMIBIA	RUGGED MTNS E. NAMIB DSRT	25.9S	16.4E	24.6S	16.6E	0	LO	250	N	N	19910409	153904	245	285	14	63
76	60	NAMIBIA	RUGGED MTNS E. NAMIB DSRT	26.5S	17.0E	24.7S	16.8E	0	LO	250	N	N	19910409	153907	245	285	13	63
76	61	NAMIBIA	LARGE AREA SALT FLATS	25.0S	17.0E	24.8S	17.3E	0	LO	250	N	N	19910409	153915	245	285	13	63
76	62	NAMIBIA	RUGGED HILLS	24.0S	16.0E	25.0S	17.9E	0	LO	250	N	N	19910409	153925	245	284	12	63
76	63	NAMIBIA	NAUKLUTBERGE	24.2S	16.2E	25.2S	18.8E	0	LO	250	N	N	19910409	153939	245	284	11	63
76	64	NAMIBIA	LEWERRIVIER, W. EDGE KALAH	25.1S	17.8E	25.2S	19.1E	0	LO	250	N	N	19910409	153944	245	284	11	63
76	65	NAMIBIA	MARIENTAL AREA	24.9S	18.1E	25.3S	19.5E	0	LO	250	N	N	19910409	153950	245	283	11	63
76	66	NAMIBIA	AREA NNW OF KEETMANSHOOP	26.2S	18.0E	25.4S	19.7E	0	LO	250	N	N	19910409	153953	245	283	10	63
76	67	NAMIBIA	AREA N OF KEETMANSHOOP	26.2S	18.2E	25.4S	19.9E	0	LO	250	N	N	19910409	153955	245	283	10	63
76	68	NAMIBIA	AREA S. OF KEETMANSHOOP	27.3S	18.5E	25.5S	20.1E	0	LO	250	N	N	19910409	153959	245	283	10	63
76	69	NAMIBIA	HAKSKEEN PAN AREA	27.2S	20.3E	25.6S	20.6E	0	OO	250	N	N	19910409	154007	245	283	10	63
80	91	NAMIBIA	ETOSHA PAN	18.0S	17.0E	8.5S	25.2E	15	HO	250	N	N	19910409	122107	246	297	56	61
83	34	NAMIBIA	ETOSHA PAN, RIO CUBANGO	19.0S	20.5E	7.8S	24.2E	30	HO	100	N	N	19910409	122048	246	297	57	61
83	35	NAMIBIA	ETOSHA PAN, RIO CUBANGO	17.5S	12.0E	8.3S	24.9E	40	HO	100	N	N	19910409	122101	246	297	56	61
83	36	NAMIBIA	ETOSHA PAN, RIO CUBANGO	18.5S	12.0E	9.3S	26.7E	20	HO	100	N	N	19910409	122135	246	297	54	61
83	46	NAMIBIA	COAST, ETOSHA PAN, DESERT	22.0S	15.0E	10.6S	5.2E	0	HO	100	N	N	19910409	135543	245	297	51	62
83	75	NAMIBIA	NAMIB DES. TSAUCHAB WADI	24.8S	16.1E	22.9S	10.4E	0	LO	100	N	Y	19910409	153727	245	287	20	63
83	76	NAMIBIA	NAMIB DES. TSARISBERGE	26.5S	16.0E	23.0S	10.9E	0	HO	100	N	Y	19910409	153734	245	287	19	63
83	77	NAMIBIA	NAMIB DES. COAST RANGES	24.0S	18.0E	23.1S	11.2E	0	HO	100	N	Y	19910409	153739	245	287	19	63
83	78	NAMIBIA	NAMIB DES. COAST RANGES	25.5S	18.0E	23.2S	11.5E	0	HO	100	N	Y	19910409	153744	245	287	19	63
83	79	NAMIBIA	NAMIB DES. COAST RANGES	24.5S	17.5E	23.5S	12.6E	0	LO	100	N	Y	19910409	153801	245	286	17	63

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
83	80	NAMIBIA	NAMIB DES, COAST RANGES	25.0S 17.5E 23.6S	12.8E	0	LO	100	N	Y	19910409	153804	245	286	17	63
83	81	NAMIBIA	NAMIB DES, COAST RANGES	26.5S 17.0E 23.7S	13.1E	0	LO	100	N	Y	19910409	153809	245	286	17	63
83	82	NAMIBIA	NAMIB DES, COAST RANGES	26.5S 18.0E 23.8S	13.5E	0	LO	100	N	Y	19910409	153816	245	286	17	63
83	83	NAMIBIA	GR. NAMALAND, MT. BRUKKAROS	25.5S 18.5E 23.9S	13.8E	0	LO	100	N	Y	19910409	153821	245	286	16	63
83	84	NAMIBIA	KALAHARI DES, DUNE FIELD	25.0S 20.0E 24.2S	14.9E	0	LO	100	N	Y	19910409	153838	245	285	15	63
86	104	NAMIBIA	NAMIB DESERT, LOW SUN ANG	26.3S 15.4E 24.8S	15.3E	0	LO	250	N	Y	19910408	161757	245	281	6	48
86	105	NAMIBIA	NAMIB DESERT, LOW SUN ANG	25.5S 15.3E 24.9S	15.6E	0	LO	250	N	Y	19910408	161801	245	280	6	48
86	106	NAMIBIA	NAMIB DESERT, LOW SUN ANG	24.7S 15.8E 25.1S	16.6E	0	LO	250	N	Y	19910408	161816	245	280	5	48
86	107	NAMIBIA	NAMIB DESERT, LOW SUN ANG	23.4S 14.9E 25.3S	17.4E	0	LO	250	N	Y	19910408	161828	245	280	4	48
87	38	NAMIBIA	ETOSHA PAN, RIO CUBANGO	18.8S 16.6E 10.7S	29.2E	15	HO	250	N	Y	19910409	122222	245	296	51	61
87	85	NAMIBIA	INTERIOR, DARK	13.4S	10.6E	0	LO	250	N	Y	19910409	135723	245	295	46	62
87	86	NAMIBIA	EKUMA WADI, SALT PAN FLD	17.5S 16.0E 14.4S	12.8E	0	LO	250	N	Y	19910409	135801	244	295	43	62
87	87	NAMIBIA	EKUMA WADI, SALT PAN FLD	18.0S 15.5E 14.5S	13.0E	0	LO	250	N	Y	19910409	135805	244	295	42	62
87	88	NAMIBIA	RIO CUBANGO, KALAHARI DES	17.8S 18.5E 14.6S	13.1E	0	LO	250	N	Y	19910409	135808	244	295	42	62
87	90	NAMIBIA	RIO CUBANGO, KALAHARI DES	18.6S 19.9E 15.2S	14.5E	0	LO	250	N	Y	19910409	135833	244	294	41	62
90	88	NAMIBIA	ETOSHA PAN & SURROUND	18.8S 16.2E 17.4S	13.6E	50	LO	250	N	Y	19910406	155510	243	281	15	17
90	89	NAMIBIA	ETOSHA PAN-NW AREA	18.6S 15.7E 17.8S	14.5E	50	LO	250	N	Y	19910406	155524	243	281	14	17
90	90	NAMIBIA	BRANDBERG INTRUSIVE, DES.	21.2S 14.6E 18.0S	15.0E	0	LO	250	N	Y	19910406	155533	243	281	13	17
90	91	NAMIBIA	EBONGBERGE INTRUSIVE	21.5S 15.5E 18.2S	15.5E	0	LO	250	N	Y	19910406	155542	243	281	13	17
90	94	NAMIBIA	NAMIB DESERT, COAST	18.5S 12.0E 19.0S	17.4E	30	LO	250	N	Y	19910406	155615	243	280	11	17
90	95	NAMIBIA	NAMIB DES, HOANIB WADI	19.5S 13.0E 19.2S	17.9E	0	LO	250	N	Y	19910406	155623	243	280	10	17
90	96	NAMIBIA	NAMIB DES, HUAB WADI, CST	21.0S 13.5E 19.3S	18.1E	0	LO	250	N	Y	19910406	155627	243	280	10	17
90	97	NAMIBIA	NAMIB DES, OMARURU WADI	22.0S 14.5E 19.4S	18.6E	0	LO	250	N	Y	19910406	155634	243	280	9	17
90	98	NAMIBIA	NAMIB DES, WALVIS BAY, CST	23.0S 14.5E 19.5S	18.9E	0	LO	250	N	Y	19910406	155639	243	280	9	17
90	99	NAMIBIA	NAMIB DES, TSAUCHAB R, CST	25.0S 15.5E 19.9S	19.7E	0	LO	250	N	Y	19910406	155653	243	280	8	17
90	100	NAMIBIA	NAMIB DES, TSAUCHAB R, CST	24.5S 15.5E 20.1S	20.4E	0	LO	250	N	Y	19910406	155705	243	279	8	17
96	48	NAMIBIA	NAMIB DESERT, DUST STORM	25.0S 15.0E		0	LO	100	N	Y						
96	49	NAMIBIA	NAMIB DESERT, DUST STORM	25.0S 14.5E		0	LO	100	N	Y						
153	39	NAMIBIA	KALAHARI DESERT	25.5S 19.0E	25.1S	0	NV	250	N	Y	19910409	153937	245	284	11	63
91	86	NEPAL	HIMALAYA RANGE, CLOUDS	25.9N	86.8E	50	LO	250	N	Y	19910406	011437	246	90	16	8
91	97	NEPAL	HIMALAYA RANGE, CLOUDS	26.0N	86.9E	65	LO	250	N	Y	19910406	011439	246	90	16	8
91	98	NEPAL	HIMALAYA RANGE, CLOUDS	26.0N	87.0E	75	LO	250	N	Y	19910406	011441	246	90	16	8
91	99	NEPAL	HIMALAYA RANGE, CLOUDS	26.1N	87.3E	85	LO	250	N	Y	19910406	011445	246	91	16	8
152	277	NEPAL	GR. HIMALAYA RANGE	28.0N 84.0E 28.2N	83.4E	25	NV	250	N	Y	19910408	013517	247	91	17	39
152	157	NEW CALEDONIA	FRANCE, ENTRECASTEAUX R.	18.5S 163.0E 19.1S	162.9E	25	NV	250	N	Y	19910407	055716	243	282	15	26
72	39	NICARAGUA	LAGO DE NICARAGUA	11.0N 85.5W 12.9N	92.0W	35	LO	100	N	Y	19910405	192308	244	250	71	4
76	79	NICARAGUA	MANAGUA AREA, HAZY	12.2N 86.3W 16.0N	90.8W	70	LO	250	N	Y	19910409	164726	245	111	69	64
76	80	NICARAGUA	HONDURAS BORDER	15.6N 90.0W 15.6N	90.0W	95	LO	250	N	Y	19910409	164740	245	111	69	64
79	69	NICARAGUA	L. NICARAGUA, OMETEPE V.	11.5N 97.5W 12.1N	88.5W	30	NV	250	N	Y	19910406	184509	244	245	76	19
79	71	NICARAGUA	L. MANAGUA, MASAYA VOL.	12.0N 86.5W 11.0N	86.3W	20	NV	250	N	Y	19910406	184549	244	253	75	19

TABLE 4.4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	CENTER LON	MADIR LAT	MADIR LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL	OR
79	72	NICARAGUA	L. NICARAGUA, OMETEPE V.	11.5N	85.5W	10.9N	86.1W	20	NV	250	N	N	19910406	184553	244	253	74	19
81	15	NICARAGUA	MANAGUA LAKE	12.5N	86.5W	11.1N	88.6W	25	NV	250	N	Y	19910405	192409	243	258	67	4
81	16	NICARAGUA	AREA NORTH OF L. MANAGUA	13.5N	86.5W	10.9N	88.1W	65	LO	250	N	Y	19910405	192418	243	259	67	4
81	17	NICARAGUA	SAINT ELENA BAY	11.5N	86.0W	10.2N	86.9W	0	NV	250	N	Y	19910405	192440	243	261	66	4
85	11	NICARAGUA	GULF OF FONSECA, SUNGLNT	12.8N	87.1W	13.9N	88.2W	5	LO	250	N	N	19910408	172700	246	134	80	49
85	12	NICARAGUA	GULF OF FONSECA, SUNGLNT	13.1N	87.4W	13.5N	87.5W	0	LO	250	N	N	19910408	172700	246	135	81	49
85	13	NICARAGUA	LAGO DE MANAGUA	12.2N	86.2W	13.3N	87.0W	30	LO	250	N	N	19910408	172752	246	137	81	49
89	59	NICARAGUA	L. MANAGUA, L. NICARAGUA	12.0N	86.0W	12.5N	85.5W	35	NV	250	N	Y	19910408	172820	246	142	83	49
89	60	NICARAGUA	L. MANAGUA, MASAYA VOLC.	12.3N	86.3W	12.4N	85.2W	40	NV	250	N	Y	19910408	172824	246	143	83	49
91	22	NICARAGUA	ESTERO REAL R. SWAMP	13.0N	87.0W	11.4N	89.0W	40	LO	250	N	N	19910405	192400	243	257	68	4
91	23	NICARAGUA	AGR. (7/8 BLACK FRAME)			11.2N	88.7W	50	LO	250	U	N	19910405	192407	243	258	67	4
91	24	NICARAGUA	AGR. (3/4 BLACK FRAME)			11.0N	88.2W	70	LO	250	U	N	19910405	192415	243	259	67	4
91	25	NICARAGUA	SANTA ELENA BAY, COAST	11.0N	86.0W	10.3N	87.0W	0	LO	250	N	N	19910405	192437	243	261	66	4
92	7	NICARAGUA	W. COAST, LAKE NICARAGUA	11.3N	85.7W	10.2N	84.8W	50	LO	250	N	N	19910406	184617	244	258	73	19
92	8	NICARAGUA	MANAGUA AREA	12.2N	86.4W	10.0N	84.5W	60	LO	250	N	N	19910406	184623	244	259	73	19
94	18	NICARAGUA	L. NICARAGUA, NICOYA PEN	11.0N	86.0W			30	LO	100	N	N						
96	51	NICARAGUA	L. NICARAGUA, MASAYA VOL	13.5N	85.5W			45	LO	100	N	N						
151	15	NICARAGUA	LAGO DE NICARAGUA	11.5N	86.0W	11.3N	88.8W	25	LO	250	N	Y	19910405	192404	243	258	68	4
151	16	NICARAGUA	LAGO DE NICARAGUA	11.5N	86.0W	10.8N	88.0W	25	LO	250	N	Y	19910405	192419	243	259	67	4
151	17	NICARAGUA	SANTA ELENA BAY	11.0N	86.0W	10.7N	87.7W	20	LO	250	N	Y	19910405	192424	243	260	67	4
151	21	NICARAGUA	PACIFIC COAST	11.0N	86.0W	9.2N	85.0W	15	LO	250	N	Y	19910405	192514	243	264	64	4
42	19	NIGER	TCHIGAI PLATEAU	22.0N	12.0E	24.4N	9.4E	0	LO	35	N	N	19910411	073757	245	97	34	89
42	20	NIGER	TCHIGAI PLATEAU	23.0N	13.0E	24.4N	9.6E	0	LO	35	N	N	19910411	073800	245	97	34	89
42	21	NIGER	TCHIGAI PLATEAU	22.0N	14.0E	24.3N	9.8E	0	LO	35	N	N	19910411	073803	245	97	34	89
42	25	NIGER	TCHIGAI PLATEAU	23.0N	13.0E	23.8N	11.6E	0	LO	35	N	N	19910411	073832	245	97	36	89
45	31	NIGER	TALAK DESERT, TEMERE DES.	20.0N	7.0E	18.3N	1.5E	5	HO	35	N	N	19910410	095406	247	105	59	75
45	32	NIGER	AIR MTNS, MARZUQ SAND SEA	19.0N	10.0E	17.1N	4.3E	20	HO	35	N	N	19910410	095455	247	106	62	75
77	18	NIGER	DALLOL BOSSO AREA	13.8N	3.0E	15.0N	1.1E	10	LO	250	N	N	19910406	122938	244	222	78	15
83	26	NIGER	WADI, DUST, DESERT	13.5N	9.5E	14.2N	8.4E	15	LO	100	N	N	19910409	103456	246	115	75	60
83	27	NIGER	TERMIT MASSIF, W. DILLIA	16.3N	11.0E	13.6N	9.8E	10	LO	100	N	N	19910409	103520	246	116	76	60
84	41	NIGER	NEAR TOWN OF TAHOUA	15.0N	5.5E			0	LO	250	N	N						
84	45	NIGER	MASSIF DE TERNIT	16.5N	11.5E			0	LO	250	N	N						
84	50	NIGER	LAKE CHAD, NORTH BASIN	13.5N	13.0E			10	LO	250	N	Y						
85	68	NIGER	TCHIGAI PLAT. AREA			23.3N	9.3E	0	LO	250	N	N	19910409	085501	246	107	50	59
85	69	NIGER	TCHIGAI AREA, WIND STRKS			22.5N	11.8E	0	LO	250	N	N	19910409	085541	246	108	53	59
85	70	NIGER	TCHIGAI AREA, WIND STRKS			22.2N	12.7E	0	LO	250	N	N	19910409	085556	246	109	54	59
85	71	NIGER	TCHIGAI AREA, WIND STRKS			22.0N	13.4E	0	LO	250	N	N	19910409	085607	246	109	55	59
85	72	NIGER	TCHIGAI AREA, WIND STRKS			21.8N	14.1E	0	LO	250	N	N	19910409	085619	246	109	55	59
85	73	NIGER	TCHIGAI AREA, WIND STRKS			21.5N	14.9E	0	LO	250	N	N	19910409	085632	246	110	56	59
86	1	NIGER	DALLOL BOSSO, SAND STORM	16.0N	4.0E	15.5N	3.9E	0	LO	250	N	N	19910408	111237	246	134	78	45

TABLE 4.4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	CENTER LON	MADIR LAT	MADIR LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
86	2	NIGER	DALLOL BOSSO, SAND STORM	15.4N	4.0E	0	LO 250 N	N	19910408	111240	246	134	78	45				
86	3	NIGER	DALLOL BOSSO, SAND STORM	15.4N	4.2E	0	LO 250 N	N	19910408	111242	246	134	78	45				
86	4	NIGER	DALLOL BOSSO, SAND STORM	15.3N	4.3E	0	LO 250 N	N	19910408	111244	246	135	78	45				
86	5	NIGER	W. NIGER, SANDSTORM	15.3N	4.4E	0	LO 250 N	N	19910408	111246	246	135	78	45				
86	6	NIGER	W. NIGER, SANDSTORM	15.2N	4.5E	0	LO 250 N	N	19910408	111248	246	135	78	45				
86	7	NIGER	W. NIGER, SANDSTORM	14.9N	5.2E	0	LO 250 N	N	19910408	111300	246	137	79	45				
86	8	NIGER	W. NIGER, SANDSTORM	14.8N	5.3E	5	LO 250 N	N	19910408	111302	246	137	79	45				
86	9	NIGER	W. NIGER, SANDSTORM	14.7N	5.5E	5	LO 250 N	N	19910408	111305	246	138	79	45				
86	10	NIGER	W. NIGER, SANDSTORM	14.0N	6.0E	5.8E	0	LO 250 N	N	19910408	111312	246	139	80	45			
86	11	NIGER	W. NIGER, SANDSTORM	14.0N	6.0E	6.0E	0	LO 250 N	N	19910408	111314	246	139	80	45			
86	14	NIGER	MARADI AREA	13.5N	7.0E	13.9N	7.2E	0	LO 250 N	N	19910408	111337	246	144	81	45		
86	21	NIGER	NEAR ZINDER	13.5N	9.0E	13.4N	8.2E	10	LO 250 N	N	19910408	111355	246	148	82	45		
86	22	NIGER	NORTH OF ZINDER	14.0N	9.0E	13.3N	8.4E	0	LO 250 N	N	19910408	111358	246	149	82	45		
88	52	NIGER	GOULBIN MARADI R.	13.3N	7.2E	14.4N	8.0E	20	LO 250 N	N	19910409	103449	246	115	74	60		
88	58	NIGER	NORTH LOBE LAKE CHAD	13.9N	13.5E	11.8N	13.2E	10	LO 250 N	N	19910409	103623	246	117	80	60		
89	98	NIGER	DESERT-DUNE FIELD	22.5N	12.0E	22.5N	12.0E	0	LO 250 N	N	19910409	085544	246	108	53	59		
89	99	NIGER	PLATEAU DU JADO AREA	22.2N	12.8E	22.2N	12.8E	0	LO 250 N	N	19910409	085558	246	109	54	59		
89	100	NIGER	PLAT. DU JADO,ACHELOUMO W	22.3N	12.3E	22.1N	13.1E	0	NV 250 N	N	19910409	085603	246	109	54	59		
89	101	NIGER	PLAT. DU JADO,ACHELOUMO W	22.0N	13.1E	22.1N	13.3E	0	NV 250 N	N	19910409	085605	246	109	54	59		
89	104	NIGER	DESERT	21.9N	13.8E	21.9N	13.8E	0	LO 250 N	N	19910409	085614	246	109	55	59		
89	105	NIGER	WIND EROSION, DESERT	22.5N	14.5E	21.8N	14.1E	0	LO 250 N	N	19910409	085618	246	109	55	59		
89	106	NIGER	MASSIF DAFIFI,WIND EROSN	22.5N	15.0E	21.7N	14.2E	0	LO 250 N	Y	19910409	085621	246	109	55	59		
89	107	NIGER	MASSIF DAFIFI,WIND EROSN	22.0N	15.0E	21.7N	14.4E	0	LO 250 N	Y	19910409	085623	246	109	55	59		
89	108	NIGER	PLAT. TCHIGAI,WIND EROSN	21.5N	15.0E	21.6N	14.5E	0	LO 250 N	Y	19910409	085626	246	109	55	59		
90	30	NIGER	LAKE CHAD,KOMADOUGOU R.	13.7N	13.4E	19.0N	16.0E	5	LO 250 N	N	19910406	105336	245	173	77	14		
95	28	NIGER	AIR MTNS.	19.0N	9.0E	23.2N	3.8E	0	LO 250 N	N	19910406	105015	246	138	68	14		
95	29	NIGER	AIR MTNS.	19.0N	9.0E	23.0N	4.5E	0	LO 250 N	N	19910406	105027	246	140	68	14		
95	33	NIGER	TINRHERT PLATEAU	23.5N	9.0E	22.4N	6.5E	0	LO 250 N	N	19910406	105059	245	143	70	14		
95	34	NIGER	TINRHERT PLATEAU	23.5N	8.0E	22.3N	6.7E	0	LO 250 N	N	19910406	105102	245	144	70	14		
95	35	NIGER	TINRHERT PLATEAU	23.0N	8.0E	22.3N	6.8E	0	LO 250 N	N	19910406	105104	245	144	70	14		
95	36	NIGER	DESERT, WIND STREAKS	22.2N	7.0E	22.2N	7.0E	0	NV 250 N	N	19910406	105107	245	145	71	14		
95	37	NIGER	DESERT, WIND STREAKS	22.2N	7.2E	22.2N	7.2E	0	NV 250 N	N	19910406	105110	245	145	71	14		
95	38	NIGER	DESERT, WIND STREAKS	22.1N	7.4E	22.1N	7.4E	0	NV 250 N	N	19910406	105113	245	145	71	14		
95	39	NIGER	TINRHERT PLATEAU	24.0N	8.0E	22.1N	7.5E	0	LO 250 N	N	19910406	105115	245	146	71	14		
95	40	NIGER	TINRHERT PLATEAU	23.5N	8.0E	22.0N	7.6E	0	LO 250 N	N	19910406	105117	245	146	71	14		
95	41	NIGER	TINRHERT PLATEAU	23.0N	9.0E	22.0N	7.8E	0	LO 250 N	N	19910406	105119	245	146	71	14		
95	42	NIGER	DESERT, WIND STREAKS	22.0N	7.9E	22.0N	7.9E	0	NV 250 N	N	19910406	105121	245	147	71	14		
95	43	NIGER	DESERT, WIND STREAKS	21.7N	8.7E	21.7N	8.7E	0	NV 250 N	N	19910406	105135	245	149	72	14		
95	44	NIGER	DESERT, WIND STREAKS	21.6N	8.9E	21.6N	8.9E	0	NV 250 N	N	19910406	105137	245	149	72	14		
95	45	NIGER	DESERT, WIND STREAKS	21.6N	9.0E	21.6N	9.0E	0	NV 250 N	N	19910406	105139	245	149	72	14		

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		MADIR		CC	TL	FL	E	S	DATE	GMT	AL	AZ	EL	SUM
				LAT	LONG	LAT	LONG											
95	46	NIGER	DESERT, WIND STREAKS	24.0N	10.0E	21.5N	9.2E	0	LV	250	N	N	19910408	105142	245	150	72	14
95	47	NIGER	TINRHERT PLATEAU	24.0N	10.0E	21.4N	9.5E	0	LO	250	N	N	19910408	105147	245	151	73	14
95	48	NIGER	TINRHERT PLATEAU	24.0N	10.0E	21.3N	9.8E	0	LO	250	N	N	19910408	105150	245	151	73	14
95	49	NIGER	TINRHERT PLATEAU	24.0N	11.0E	21.3N	9.9E	0	LO	250	N	N	19910408	105154	245	152	73	14
96	76	NIGER	MARZUQ DES., TCHIGAI P.	22.0N	12.5E			0	LO	100	N	Y						
96	77	NIGER	TCHIGAI PLATEAU	21.0N	13.0E			0	LO	100	N	Y						
97	74	NIGER	PLATEAU DU DJADO	22.0N	15.0E	21.8N	8.4E	0	LO	250	N	N	19910408	105129	245	147	72	14
98	47	NIGER	TENERE DESERT			22.6N	7.9E	0	LO	250	N	N	19910407	101222	246	127	65	29
98	48	NIGER	TENERE DESERT			22.5N	8.1E	0	LO	250	N	N	19910407	101225	246	127	65	29
98	49	NIGER	TCHIGAI PLATEAU			22.4N	8.4E	0	LO	250	N	N	19910407	101231	246	127	65	29
153	0	A NIGER	TAGAMA DESERT					15	LO	250	N	N						
153	0	B NIGER	TAGAMA DESERT					20	LO	250	N	Y						
77	19	NIGERIA	KAINJI LAKE AREA	10.7N	4.5E	14.7N	1.8E	60	LO	250	N	N	19910406	122951	244	226	78	15
77	20	NIGERIA	SOKOTO AREA	13.0N	5.0E	13.4N	4.4E	0	LO	250	N	N	19910406	123037	244	238	78	15
77	21	NIGERIA	NIGER BORDER AREA			13.0N	5.2E	0	LO	250	N	N	19910406	123053	244	242	78	15
77	22	NIGERIA	NIGER BORDER AREA			12.4N	6.4E	0	LO	250	N	N	19910406	123114	244	246	75	15
77	23	NIGERIA	LARGE RESERVOIR, UNMAPPED			10.1N	10.7E	40	LO	250	N	N	19910406	123233	244	259	71	15
77	24	NIGERIA	LARGE RESERVOIR, UNMAPPED			9.6N	11.7E	40	LO	250	N	N	19910406	123252	243	261	70	15
80	41	NIGERIA	CITY OF LAGOS	6.5N	3.5E	4.7N	2.4E	65	LO	250	N	N	19910408	121352	246	297	83	61
80	42	NIGERIA	SLAVE COAST	6.5N	3.0E	4.5N	2.7E	75	LO	250	N	Y	19910409	121358	246	297	83	61
83	23	NIGERIA	ZAMFARA R, SOKOTO R, DUST	13.0N	4.8E	16.2N	4.2E	10	LO	100	N	Y	19910409	103341	246	114	70	60
83	24	NIGERIA	SOKOTO R, DUST, SOKOTO, AFD	13.0N	5.5E	15.7N	5.4E	15	LO	100	N	Y	19910409	103402	246	114	71	60
83	25	NIGERIA	MARADI WADI, NKANABA WADI	13.8N	7.7E	15.0N	6.8E	10	LO	100	N	N	19910409	103428	246	115	73	60
83	28	NIGERIA	LAKE CHAD, CLOUDY, DUST	13.5N	13.5E	13.2N	10.5E	50	LO	100	N	Y	19910409	103533	246	116	77	60
83	29	NIGERIA	LAKE CHAD, CLOUDY, DUST	13.5N	13.5E	12.9N	11.1E	60	LO	100	N	Y	19910409	103544	246	116	78	60
83	30	NIGERIA	LAKE CHAD, CLOUDY, DUST	13.5N	13.5E	12.7N	11.5E	60	LO	100	N	Y	19910409	103552	246	117	78	60
83	31	NIGERIA	LAKE CHAD, CLOUDY, DUST	13.5N	13.5E	12.4N	12.1E	60	LO	100	N	Y	19910409	103603	246	117	79	60
83	32	NIGERIA	LAKE CHAD, CLOUDY, DUST	13.5N	13.5E	11.6N	13.7E	60	LO	100	N	Y	19910409	103631	246	117	81	60
84	42	NIGERIA	RIHA RIVER N. OF SOKOTO	13.5N	5.5E			15	LO	250	N	N						
84	43	NIGERIA	NEAR VILLAGE OF ISA	13.5N	6.5E			5	LO	250	N	N						
84	44	NIGERIA	WEST OF LAKE CHAD	11.5N	11.0E			10	LO	250	N	N						
84	46	NIGERIA	LAKE CHAD, SOUTH BASIN	13.0N	14.0E			5	LO	250	N	Y						
84	51	NIGERIA	LAKE CHAD, MAIDUGURI	13.0N	13.0E			15	LO	250	N	N						
84	52	NIGERIA	CHARI R. LOWLANDS	12.0N	14.5E			5	LO	250	N	N						
86	12	NIGERIA	SOKOTO AREA	13.3N	5.4E	14.4N	6.2E	0	LO	250	N	N	19910408	111318	246	140	80	45
86	13	NIGERIA	SOKOTO AREA	13.0N	5.2E	14.3N	6.4E	0	LO	250	N	N	19910408	111322	246	140	80	45
86	15	NIGERIA	W.OF KANO	12.5N	7.3E	13.8N	7.3E	0	LO	250	N	N	19910408	111339	246	144	81	45
86	16	NIGERIA	W.OF KANO	12.4N	7.2E	13.7N	7.5E	0	LO	250	N	N	19910408	111342	246	145	81	45
86	17	NIGERIA	W.OF KANO	12.3N	7.5E	13.6N	7.7E	0	LO	250	N	N	19910408	111346	246	146	82	45
86	18	NIGERIA	W.OF KANO	12.5N	8.0E	13.6N	7.9E	0	LO	250	N	N	19910408	111349	246	146	82	45

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		MADIR		CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN	EL	OR
				LAT	LONG	LAT	LONG												
86	19	NIGERIA	NW. OF KANO	13.0N	8.0E	13.5N	8.0E	0	LO	250	N	N	19910408	111351	246	147	82	45	
86	20	NIGERIA	NW. OF KANO			13.4N	8.1E	10	LO	250	N	N	19910408	111353	246	148	82	45	
86	23	NIGERIA	HADEJIA AREA	12.5N	10.0E	12.7N	9.7E	20	LO	250	N	N	19910408	111421	246	157	83	45	
86	24	NIGERIA	HADEJIA AREA	12.2N	9.3E	12.6N	9.8E	20	LO	250	N	N	19910408	111423	246	158	84	45	
86	25	NIGERIA	KANO AREA, KANO RIVER	12.0N	8.7E	12.5N	9.9E	30	LO	250	N	N	19910408	111428	246	159	84	45	
86	26	NIGERIA	AREA W. OF KANO	12.0N	8.0E	12.5N	10.1E	40	LO	250	N	N	19910408	111428	246	160	84	45	
86	27	NIGERIA	NEAR POTISKUM	12.0N	11.0E	11.8N	11.4E	60	NV	250	N	N	19910408	111453	246	174	85	45	
86	28	NIGERIA	NEAR POTISKUM	11.0N	11.5E	11.7N	11.6E	70	NV	250	N	N	19910408	111457	246	177	85	45	
88	51	NIGERIA	RIMA R. GOULBIN MARADI R.	13.7N	5.5E	14.9N	7.1E	20	LO	250	N	N	19910409	103432	246	115	73	60	
88	53	NIGERIA	GRAZING, HAZE			14.1N	8.7E	0	LO	250	N	N	19910409	103500	246	116	76	60	
88	54	NIGERIA	KANO, GRAZING	13.6N	8.8E	13.5N	9.9E	0	NV	250	N	Y	19910409	103522	246	116	76	60	
88	55	NIGERIA	KANO, KANO R. DUST STORM	12.1N	9.0E	13.3N	10.3E	25	LO	250	N	Y	19910409	103530	246	116	77	60	
88	56	NIGERIA	KOMADUGU GANA R/SWAMP	12.6N	11.5E	12.6N	11.7E	25	NV	250	N	N	19910409	103555	246	117	78	60	
90	29	NIGERIA	LAKE CHAD	13.0N	14.0E	19.4N	14.8E	45	LO	250	N	N	19910406	105316	245	168	76	14	
90	40	NIGERIA	KANO, AFLDS, RDS, RESERV.	12.5N	8.5E	11.5N	8.2E	5	LO	250	N	N	19910406	123147	244	252	73	15	
90	41	NIGERIA	KOMADUGOU Y08E/GANA R.	12.8N	11.4E	10.5N	10.0E	0	LO	250	N	N	19910406	123220	244	257	72	15	
90	42	NIGERIA	L. CHAD, KAMADUGOU R.	13.5N	13.5E	10.1N	10.7E	0	LO	250	N	N	19910406	123233	244	259	71	15	
90	43	NIGERIA	LAKE CHAD	13.0N	14.0E	10.1N	10.9E	40	LO	250	N	N	19910406	123236	243	259	71	15	
152	14	NIGERIA	BENUE RIVER	9.5N	11.5E	9.3N	12.3E	20	NV	250	N	Y	19910406	123303	243	263	70	15	
152	15	NIGERIA	BENUE RIVER-RESERVOIR	9.0N	13.0E	8.5N	13.8E	25	NV	250	N	Y	19910406	123330	243	265	68	15	
153	0	C NIGERIA	AREA EAST OF SOKOTO					15	LO	250	N	Y							
153	0	D NIGERIA	AREA EAST OF SOKOTO	13.0N	6.5E			25	LO	250	N	Y							
153	0	E NIGERIA	DNGAIYA RIVER	12.0N	11.5E			10	LO	250	N	N							
153	0	F NIGERIA	DNGAIYA RIVER	12.0N	11.0E			15	LO	250	N	Y							
153	0	G NIGERIA	DNGAIYA RIVER	11.5N	10.5E			30	LO	250	N	Y							
153	0	H NIGERIA	AREA WEST OF LAKE CHAD	13.0N	13.0E			20	LO	250	N	N							
153	0	K NIGERIA	MANDARA MOUNTAINS	13.0N	13.5E			20	LO	250	N	Y							
94	38	OCEAN	EDDIES, SUNGLINT					25	HO	100	N	N							
94	39	OCEAN	EDDIES, SUNGLINT					15	HO	100	N	N							
94	40	OCEAN	EDDIES, SUNGLINT					30	HO	100	N	N							
94	41	OCEAN	CLOUDS					80	HO	100	N	N							
12	5	OMAN	EMPTY QUARTER	20.0N	55.0E	19.0N	47.6E	5	HO	35	O	N	19910410	064640	247	106	58	73	
12	6	OMAN	WAHIBA SANDS, OMAN MTNS.	23.0N	56.0E	18.9N	47.8E	35	HO	35	N	N	19910410	064643	247	106	58	73	
12	9	OMAN	EMPTY QUARTER, SALALAH	17.0N	53.0E	17.7N	50.8E	5	LO	35	N	N	19910410	064735	247	106	61	73	
12	10	OMAN	EMPTY QUARTER, SALALAH	17.0N	54.0E	17.5N	51.1E	5	LO	35	N	N	19910410	064740	247	106	62	73	
12	11	OMAN	EMPTY QUARTER, SALALAH	18.0N	53.0E	17.2N	51.8E	5	LO	35	N	N	19910410	064752	247	106	62	73	
12	12	OMAN	EMPTY QUARTER, SALALAH	19.0N	54.0E	16.7N	53.0E	5	LO	35	N	N	19910410	064813	247	107	64	73	
12	16	OMAN	EMPTY QUARTER, SALALAH	18.0N	56.0E	15.6N	55.5E	10	HO	35	N	N	19910410	064857	247	107	67	73	
38	25	OMAN	EMPTY QUARTER, SAND DUNES	23.0N	56.0E	24.7N	56.1E	5	LO	35	N	N	19910411	043042	245	97	34	87	
38	26	OMAN	WAHIBA SANDS, ALLUV. FAN	22.0N	57.0E	24.5N	56.8E	0	LO	35	N	N	19910411	043053	245	97	34	87	



TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	LONG	MADIR LAT	LONG	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
38	27	OMAN	OMAN MTS., WAHIBA SANDS	22.0N	58.0E	24.4N	57.2E	10	LO	35	N	N	19910411	043100	245	97	35	87
41	1	OMAN	CITY OF SALALAH	17.0N	54.0E	18.1N	51.6E	5	LO	35	N	N	19910411	080929	247	101	53	88
41	2	OMAN	SALALAH, EMPTY QUARTER	18.0N	52.0E	17.3N	53.4E	10	LO	35	N	N	19910411	061000	247	101	55	88
41	3	OMAN	OMAN MTS., WAHIBA SANDS	22.0N	57.0E	15.8N	56.8E	15	HO	35	N	N	19910411	061100	247	100	59	88
41	4	OMAN	OMAN MTS., WAHIBA SANDS	22.0N	60.0E	15.4N	57.6E	20	HO	35	N	N	19910411	061115	247	100	60	88
41	7	OMAN	EMPTY QUARTER, MASIRAH I	23.0N	56.0E	14.5N	59.4E	15	HO	35	N	N	19910411	061148	247	100	62	88
41	8	OMAN	EMPTY QUARTER, MASIRAH I			14.2N	60.0E	20	HO	35	O	N	19910411	061157	247	100	63	88
73	52	OMAN	PIPELINES AND ROADS			21.9N	57.7E	0	LO	250	N	N	19910407	070603	246	131	67	27
73	54	OMAN	AL MASIRAH AREA	20.5N	58.9E	20.4N	62.0E	10	LO	250	N	N	19910407	070715	246	138	72	27
94	57	OMAN	MADRAKAH PT., SAWQIRAH B	19.0N	56.0E			5	LO	100	N	N						
94	58	OMAN	SAMHAN MTS., QAMAR BAY	18.0N	54.0E			10	HO	100	N	N						
94	59	OMAN	COAST, EMPTY QUARTER	19.0N	51.0E			10	HO	100	N	N						
94	60	OMAN	ALLUVIAL FANS, OMAN MTS	21.5N	57.5E			10	LO	100	N	N						
94	61	OMAN	EMPTY QUARTER, DUST ST.	22.0N	52.5E			10	HO	100	N	N						
94	62	OMAN	AL MASIRAH IS., ALL. FAN	20.5N	59.0E			5	LO	100	N	N						
151	131	OMAN	MUSANDAM PENINSULA	26.5N	56.5E	27.5N	55.4E	5	NV	250	N	Y	19910406	060449	246	116	51	11
151	171	OMAN	NORTHEAST OMAN	22.5N	57.5E	21.9N	55.9E	10	LO	250	N	Y	19910406	074433	245	150	72	12
151	172	OMAN	WADIS-COAST-GULF OF OMAN	22.0N	58.0E	21.8N	58.7E	5	LO	250	N	Y	19910406	074446	245	152	72	12
151	173	OMAN	COAST-AL MASIRAH	21.0N	58.5E	21.1N	58.2E	10	LO	250	N	Y	19910406	074511	245	156	74	12
152	99	OMAN	AKHDAR MNTS.-COAST	24.5N	58.5E	27.4N	58.1E	60	LO	250	N	N	19910407	052634	246	110	46	26
152	193	OMAN	COAST-ARABIAN SEA	22.0N	59.5E	21.3N	59.6E	25	NV	250	N	Y	19910407	070634	246	134	69	27
152	194	OMAN	COAST-ARABIAN SEA	22.0N	60.0E	20.8N	60.9E	30	LO	250	N	Y	19910407	070656	246	136	71	27
152	195	OMAN	COAST-AL MASIRAH	20.0N	59.5E	20.3N	62.2E	25	LO	250	N	Y	19910407	070718	245	138	72	27
39	5	PACIFIC OCEAN	DYING THUNDERSTORM			9.0S	115.4W	35	LO	35	N	N	19910410	210404	248	309	64	82
39	6	PACIFIC OCEAN	OCEAN FEATURES			13.6S	106.7W	10	LO	35	N	N	19910410	210843	248	304	54	82
39	7	PACIFIC OCEAN	CLOUD FORMATIONS			17.5S	98.3W	100	LO	35	N	N	19910410	210912	248	300	44	82
39	8	PACIFIC OCEAN	CLOUD FORMATIONS			19.3S	94.0W	55	LO	35	N	N	19910410	211026	247	299	39	82
39	9	PACIFIC OCEAN	CLOUD FORMATIONS			22.5S	85.2W	90	LO	35	N	N	19910410	211253	247	294	30	82
39	10	PACIFIC OCEAN	VORTICES OVER HUMBOLDT C			25.3S	75.2W	80	LO	35	N	N	19910410	211531	246	290	20	82
40	9	PACIFIC OCEAN	CLOUDS, OCEAN FEATURES			27.4N	138.1E	40	LO	35	N	N	19910410	221320	244	92	22	83
40	10	PACIFIC OCEAN	SUNGLINT, EDDIES			26.6N	142.9E	35	LO	35	N	N	19910410	221432	244	94	27	83
40	11	PACIFIC OCEAN	SUNGLINT, EDDIES			26.3N	144.4E	30	LO	35	N	N	19910410	221456	245	95	28	83
40	12	PACIFIC OCEAN	SUNGLINT, EDDIES			25.6N	147.8E	30	LO	35	N	N	19910410	221548	245	96	32	83
40	13	PACIFIC OCEAN	THUNDERSTORM			8.7N	169.9W	75	LO	35	N	N	19910410	222749	248	92	77	83
40	14	PACIFIC OCEAN	CHRISTMAS ISLAND, WAKES	2.0N	157.0W	3.8N	161.4W	25	LO	35	N	N	19910410	223030	248	44	84	83
40	15	PACIFIC OCEAN	MARQUESAS ISLANDS	9.0S	140.0W	7.1S	142.7W	35	LO	35	N	N	19910410	223628	248	313	68	83
40	16	PACIFIC OCEAN	VIEW W. TOWARD SUNSET			28.6S	71.9W	70	HO	35	N	N	19910410	225545	245	276	-5	83
71	80	PACIFIC OCEAN	WAVES			23.2N	117.2W	0	LO	250	N	N	19910405	191556	245	152	70	4
71	84	PACIFIC OCEAN	S.GLINT-OIL SL.,OC FRONT			21.9N	113.3W	0	LO	250	N	N	19910405	191659	245	163	73	4
71	85	PACIFIC OCEAN	SUNGLINT-OCEAN EDDIES			20.3N	108.8W	10	LO	250	N	N	19910405	191813	245	180	75	4

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL OR
72	1	PACIFIC OCEAN	CLOUDS-CLOUD LINE		28.3N 122.1W	60	LO	100	N	N	19910405	173513	246	113	46 3
72	24	PACIFIC OCEAN	OPEN CONVECTION CELLS		28.4N 157.1W	90	LO	100	N	N	19910405	190557	246	104	36 4
72	25	PACIFIC OCEAN	TRADE WINDS CLOUDS		28.5N 156.0W	85	HO	100	N	N	19910405	190613	246	105	37 4
72	26	PACIFIC OCEAN	TRADE WINDS CLOUDS		28.5N 154.3W	40	LO	100	N	Y	19910405	190639	246	106	38 4
72	27	PACIFIC OCEAN	TRADE WINDS CLOUDS		28.5N 151.8W	40	LO	100	N	Y	19910405	190714	246	108	41 4
72	28	PACIFIC OCEAN	TRADE WINDS CLOUDS		28.4N 147.3W	70	LO	100	N	N	19910405	190820	246	111	45 4
72	29	PACIFIC OCEAN	CLOSED CONVECTION CLOUDS		26.7N 131.8W	90	LO	100	N	N	19910405	191210	246	126	58 4
72	79	PACIFIC OCEAN	CLOUDS		19.2N 177.5W	30	LO	100	N	N	19910405	235922	245	186	76 7
75	85	PACIFIC OCEAN	CLDS. N. OF HAWAII IS.		25.1N 155.7W	80	LO	250	N	N	19910408	164801	246	86	7 18
75	86	PACIFIC OCEAN	CLDS. N. OF HAWAII IS.		25.2N 155.3W	80	LO	250	N	N	19910408	164808	246	86	8 18
75	87	PACIFIC OCEAN	CLDS. N. OF HAWAII IS.		25.4N 154.4W	80	LO	250	N	N	19910408	164822	246	87	9 18
75	89	PACIFIC OCEAN	CLOUDS & WATER		28.2N 118.4W	60	LO	250	N	N	19910408	165714	246	108	42 18
79	66	PACIFIC OCEAN	OCEAN OFF MEXICAN COAST		18.8N 102.9W	10	LO	250	N	N	19910408	184055	245	164	77 19
79	68	PACIFIC OCEAN	SHIP WAKES, WAVES		15.1N 94.5W	5	LO	250	N	N	19910408	184321	244	212	79 19
81	11	PACIFIC OCEAN	SHIP WAKES, SUNGLINT		13.6N 93.3W	5	LO	250	N	N	19910405	192242	244	247	72 4
81	12	PACIFIC OCEAN	SHIP WAKES, OIL SLICKS		13.3N 92.7W	5	LO	250	N	N	19910405	192253	244	248	71 4
85	35	PACIFIC OCEAN	NO OBVIOUS FEATURES		1.8S 155.6W	5	LO	250	N	N	19910408	235004	245	293	66 53
85	36	PACIFIC OCEAN	NO OBVIOUS FEATURES		2.3S 154.6W	10	LO	250	N	N	19910408	235023	245	293	65 53
85	40	PACIFIC OCEAN	NO OBVIOUS FEATURES		12.8S 135.8W	40	LO	250	N	N	19910408	235617	245	292	42 53
85	41	PACIFIC OCEAN	NO OBVIOUS WATER FEATURES		14.4S 132.4W	20	LO	250	N	N	19910408	235718	245	292	39 53
85	42	PACIFIC OCEAN	NO OBVIOUS WATER FEATURES		17.9S 124.6W	50	LO	250	N	N	19910408	235934	245	290	30 53
85	43	PACIFIC OCEAN	NO OBVIOUS WATER FEATURES		18.0S 124.4W	40	LO	250	N	N	19910408	235938	245	290	30 53
85	44	PACIFIC OCEAN	OVEREXPOSED		21.7S 114.5W	30	LO	250	N	N	19910409	000224	245	288	19 53
91	1	PACIFIC OCEAN	EDDIES, SHEARS		21.0N 110.7W	20	LO	250	N	N	19910405	191742	245	172	75 4
91	19	PACIFIC OCEAN	CURRENT STRUCTURE, SNGLT		13.6N 93.4W	5	LO	250	N	N	19910405	192240	244	247	72 4
91	20	PACIFIC OCEAN	CURRENT STRUCTURE		13.3N 92.8W	5	LO	250	N	N	19910405	192251	244	248	71 4
91	94	PACIFIC OCEAN	CLOUDS, CONV. CELLS		27.2N 153.3E	70	LO	250	N	N	19910405	235139	246	121	55 7
93	22	PACIFIC OCEAN	FRONTS, UPWELLING		25.0N 164.5E	10	LO	250	N	N	19910405	235430	246	135	64 7
93	23	PACIFIC OCEAN	COLLAPSING T/S		24.5N 166.6E	30	LO	250	N	N	19910405	235503	246	138	66 7
93	24	PACIFIC OCEAN	JOHNSTON ISLAND	16.5N 169.5W	16.8N 171.7W	10	LO	250	N	N	19910406	000101	244	216	76 7
94	12	PACIFIC OCEAN	CLOUDS OFF BAJA CALIF.			90	LO	100	U	N					
94	13	PACIFIC OCEAN	SHIP WAKES IN SUNGLINT	19.0N 106.0W		0	LO	100	U	N					
94	17	PACIFIC OCEAN	FRONT OFF GUATEMALA C.	13.0N 92.0W		25	LO	100	N	N					
94	19	PACIFIC OCEAN	INT. WAVES, COSTA RICA C	9.0N 85.0W		50	LO	100	U	N					
94	32	PACIFIC OCEAN	CLOUDS			85	LO	100	U	N					
94	33	PACIFIC OCEAN	CLOUDS			95	LO	100	U	N					
96	4	PACIFIC OCEAN	GRO. PEARL + HERMES REEF	28.0N 176.0W		15	NV	100	N	N					
96	37	PACIFIC OCEAN	CLOUDS, SUNGLINT			60	HO	100	N	N					
151	1	PACIFIC OCEAN	SUNGLINT-OCEAN EDDIES	21.7N 112.6W		0	LO	250	N	N	19910405	191710	245	165	73 4
151	27	PACIFIC OCEAN	SUNGLINT-WAVES, SHIPWAKES	7.5N 82.5W	6.9N 80.8W	10	LO	250	N	Y	19910405	192633	243	270	60 4

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LONG	NADIR LAT LONG	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR		
152	156	PACIFIC OCEAN	CLOUDS		17.7S 159.6E	80	LO	250	N	N	19910407	055619	243	283	18	26		
152	158	PACIFIC OCEAN	CLOUDS, HORIZON, UNDEREXPO		24.4S 179.0E		HO	250	U	N	19910407	060136	243	276	-1	26		
153	13	PACIFIC OCEAN	BLANK		28.5N 123.4W		LO	250	O	N	19910409	145918	243	88	13	83		
153	157	PACIFIC OCEAN	CLOUD STREAKS		2.6N 137.3W	25	LO	250	N	N	19910409	213533	247	309	81	67		
153	158	PACIFIC OCEAN	CLOUD STREAKS		1.6N 135.5W	35	LO	250	N	N	19910409	213607	247	307	79	67		
153	159	PACIFIC OCEAN	CLOUD STREAKS		0.5N 133.6W	20	LO	250	N	N	19910409	213643	247	305	77	67		
153	160	PACIFIC OCEAN	OCEAN WAVE PATTERNS		1.2S 130.8W	30	LO	250	N	N	19910409	213738	247	303	73	67		
91	95	PACIFIC OCEAN ISLAND	JOHNSON ATOLL		16.5N 169.5W	16.0N	170.0W	10	NV	250	N	19910406	000131	244	225	76	7	
92	35	PACIFIC OCEAN ISLAND	FRENCH FRIGATE SHOALS		23.8N 166.1W	23.8N	165.1W	30	LO	250	N	19910406	214350	246	129	84	21	
151	1	A PACIFIC OCEAN ISLAND	SAN BENEDICTO I. -SUNGLIN		20.6N 109.5E	5	LO	250	N	Y	19910405	191802	245	177	75	4		
151	91	PACIFIC OCEAN ISLAND	JOHNSTON ATOLL		16.0N 169.5W	16.5N	171.2W	25	LO	250	N	Y	19910406	000110	244	219	76	7
151	91	A PACIFIC OCEAN ISLAND	JOHNSTON ATOLL		16.0N 169.5W	16.4N	170.8W	25	LO	250	N	Y	19910406	000118	244	221	76	7
151	97	PAKISTAN	INDUS RIVER		27.0N 68.0E	28.4N	68.5E	35	LO	250	N	19910406	042845	246	108	42	10	
152	101	PAKISTAN	CENTRAL MAKRAK RANGE		26.5N 65.0E	26.8N	62.3E	30	LO	250	N	19910407	052736	246	113	49	26	
152	102	PAKISTAN	INDUS RIVER		25.0N 68.5E	26.0N	66.3E	50	LO	250	N	19910407	052837	246	116	53	26	
72	40	PANAMA	LAGUNA DE CHIRIQUI		8.5N 82.5W	11.4N	89.2W	50	LO	100	N	Y	19910405	192358	243	257	68	4
72	41	PANAMA	LAGUNA DE CHIRIQUI		9.0N 82.0W	10.0N	86.4W	30	LO	100	N	Y	19910405	192449	243	262	66	4
72	42	PANAMA	CERRO SANTIAGO		8.5N 82.0W	6.8N	80.6W	40	LO	100	N	Y	19910405	192637	243	270	60	4
72	43	PANAMA	BAY OF PANAMA		9.0N 79.5W	6.3N	79.7W	70	LO	100	N	Y	19910405	192655	243	271	59	4
72	44	PANAMA	BAY OF PANAMA		8.5N 79.5W	5.9N	79.1W	70	LO	100	N	Y	19910405	192706	243	271	58	4
72	45	PANAMA	BAY OF PANAMA-BRIGHT		5.6N 78.6W			80	LO	100	O	Y	19910405	192716	243	272	57	4
72	46	PANAMA	BAY OF PANAMA-BRIGHT		5.2N 77.9W			80	LO	100	O	Y	19910405	192729	243	272	57	4
72	47	PANAMA	BAY OF PANAMA-BRIGHT		4.9N 77.3W			80	LO	100	O	Y	19910405	192740	243	273	56	4
72	48	PANAMA	BAY OF PANAMA-BRIGHT		4.6N 76.8W			90	LO	100	O	Y	19910405	192750	243	273	55	4
72	49	PANAMA	BAY OF PANAMA-BRIGHT		4.2N 76.1W			90	LO	100	O	Y	19910405	192802	243	274	55	4
79	73	PANAMA	COIBA ISLAND		7.5N 81.5W	8.5N	81.8W	40	LO	250	N	19910406	184713	244	264	70	19	
79	74	PANAMA	CENTRAL PANAMA		8.1N 81.0W	8.1N	81.0W	80	HO	250	N	19910406	184728	244	266	70	19	
79	75	PANAMA	CENTRAL PANAMA		8.0N 80.8W	8.0N	80.8W	80	HO	250	N	19910406	184731	244	266	69	19	
79	76	PANAMA	CENTRAL PANAMA		7.7N 80.4W	7.7N	80.4W	85	HO	250	N	19910406	184740	244	267	69	19	
81	22	PANAMA	CHIRIQUI BAY		9.0N 82.0W	8.8N	84.1W	30	LO	250	N	19910405	192531	243	266	63	4	
81	23	PANAMA	CHARCO AZUL BAY		8.5N 83.0W	8.5N	83.7W	20	LO	250	N	19910405	192539	243	266	63	4	
81	25	PANAMA	CLOUDS		7.3N 81.5W			85	LO	250	N	19910405	192620	243	269	60	4	
81	26	PANAMA	CLOUDS		6.6N 80.2W			95	LO	250	N	19910405	192645	243	270	59	4	
85	15	PANAMA	COLON, PANAMA CANAL		9.5N 79.9W	10.0N	80.8W	60	LO	250	N	19910408	172846	246	202	86	49	
85	16	PANAMA	ISTHMUS OF PANAMA		9.3N 79.8W	9.9N	80.6W	60	LO	250	N	19910408	172950	246	207	86	49	
85	17	PANAMA	COLON, CANAL		9.4N 79.8W	9.6N	80.0W	60	LO	250	N	19910408	173000	246	219	86	49	
85	18	PANAMA	PANAMA CITY, CANAL		9.0N 79.6W	9.5N	79.9W	70	LO	250	N	19910408	173003	246	222	86	49	
89	62	PANAMA	PANAMA CANAL, COLON		9.2N 79.8W	8.2N	77.5W	75	LO	250	N	Y	19910408	173047	246	255	85	49
89	63	PANAMA	PANAMA CANAL, COLON		8.9N 79.9W	8.0N	77.1W	75	LO	250	N	Y	19910408	173055	246	259	85	49
89	64	PANAMA	PANAMA CANAL, COLON		9.0N 80.0W	7.6N	76.4W	75	LO	250	N	Y	19910408	173108	246	264	84	49

TABLE 4.4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADIR LAT LON	CC TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL OR
89	65	PANAMA	PANAMA CANAL, COLON	8.5N 79.9W	7.5N 76.2W	80	LO	250	N	Y	19910408	173111	246	266 84 49
91	30	PANAMA	LAGUNA CHIRIQUI, ISLANDS	9.0N 82.0W	8.8N 84.2W	50	LO	250	N	Y	19910405	192529	243	266 83 4
91	33	PANAMA	PENINSULA AZUERO	7.5N 80.5W	8.1W 83.1W	40	LO	250	N	Y	19910405	192551	243	267 82 4
91	34	PANAMA	PENINSULA AZUERO	8.0N 80.0W	7.4N 81.6W	50	LO	250	N	Y	19910405	192618	243	269 60 4
91	37	PANAMA	ISLANDS, COAST, CLOUDS		5.7N 78.7W	80	LO	250	U	N	19910405	192713	243	272 57 4
96	53	PANAMA	CANAL ZONE, COLON	9.0N 80.0W		60	LO	100	N	Y				
96	54	PANAMA	CANAL ZONE, COLON	9.0N 79.0W		60	LO	100	N	Y				
96	55	PANAMA	CANAL ZONE, PANAMA CITY	9.0N 80.0W		60	LO	100	N	Y				
151	25	PANAMA	LAGUNA DE CHIRIQUI	9.0N 82.5W	8.3N 83.4W	30	NV	250	N	Y	19910405	192545	243	267 82 4
151	26	PANAMA	GULF OF CHIRQUI	8.0N 82.0W	8.2N 83.1W	30	LO	250	N	Y	19910405	192551	243	267 82 4
153	4	PANAMA	CITY OF COLON, CLOUDS	8.5N 81.0W	9.0N 78.8W	75	HO	250	N	N	19910408	173022	246	243 86 49
153	6	PANAMA	CANAL ZONE, COLON	9.5N 79.0W	7.3N 75.9W	70	HO	250	N	N	19910408	173118	246	269 83 49
153	7	PANAMA	CANAL ZONE, COLON	9.5N 79.5W		70	HO	250	N	N				
151	161	PAPUA NEW GUINEA	EASTERN TIP	10.5S 149.0E	12.3S 145.9E	25	LO	250	N	N	19910408	083118	242	282 24 11
152	152	PAPUA NEW GUINEA	HOOD BAY-COAST-CORAL SEA	10.0S 148.0E	11.9S 147.1E	50	LO	250	N	N	19910407	055237	243	285 32 26
152	153	PAPUA NEW GUINEA	LONG REEF-CONFLICT GROUP	11.0S 151.0E	13.6S 150.5E	70	LO	250	N	N	19910407	055340	243	285 28 26
10	17	PARAGUAY	CHACO PLAIN, DARK	23.0S 59.7W	23.0S 59.7W	55	LO	35	U	N	19910410	193951	247	293 28 81
10	18	PARAGUAY	CHACO PLAIN, DARK	23.2S 59.0W	23.2S 59.0W	40	LO	35	U	N	19910410	194002	247	293 27 81
10	19	PARAGUAY	CHACO PLAIN, DARK	23.6S 57.6W	23.6S 57.6W	25	LO	35	U	N	19910410	194024	247	292 26 81
89	83	PARAGUAY	DARK, CLOUDS	24.9S 55.7W	24.9S 55.7W	50	LO	250	U	N	19910408	205830	244	281 7 51
89	84	PARAGUAY	DARK	25.1S 54.9W	25.1S 54.9W	5	LO	250	U	N	19910408	205843	244	281 6 51
89	85	PARAGUAY	DARK	25.3S 54.2W	25.3S 54.2W	20	LO	250	U	N	19910408	205854	244	280 6 51
96	67	PARAGUAY	PARANA R., BORDER LAND U	25.0S 55.5W		30	NV	100	U	Y				
96	68	PARAGUAY	PARANA R., BORDER LAND U	25.0S 54.5W		25	NV	100	U	Y				
153	120	PARAGUAY	PARAGUAY R., CONCEPCION	23.0S 58.5W	23.2S 60.4W	30	LO	250	N	N	19910409	201800	247	288 20 66
153	121	PARAGUAY	PARAGUAY R., ROSARIO	22.0S 58.0W		30	LO	250	N	Y				
153	125	PARAGUAY	TEBICUARY RIVER	26.0S 56.5W		35	LO	250	N	Y				
153	126	PARAGUAY	PARAGUAY R., YGUAZI R.	25.5S 56.5W	23.7S 58.6W	15	LO	250	N	N	19910409	201828	247	287 18 66
153	127	PARAGUAY	TEBICUARY RIVER	26.0S 56.5W		30	LO	250	N	Y				
153	128	PARAGUAY	PARAGUAY R. ROSARIO	24.0S 57.0W	23.8S 58.3W	10	LO	250	N	N	19910409	201834	247	287 18 66
153	129	PARAGUAY	PARAGUAY R. ROSARIO	24.5S 56.5W		10	LO	250	U	Y				
153	130	PARAGUAY	PARAGUAY R. ROSARIO	24.0S 57.0W	23.9S 57.7W	20	LO	250	U	Y	19910409	201842	247	287 17 66
153	131	PARAGUAY	PARAGUAY R. ROSARIO	24.0S 56.5W		20	LO	250	U	Y				
153	132	PARAGUAY	PARANA RIVER	24.5S 56.0W	24.0S 57.3W	20	LO	250	N	Y	19910409	201849	247	286 17 66
153	133	PARAGUAY	PARANA, YGUAZI RIVERS	25.0S 55.5W		10	LO	250	N	Y				
153	134	PARAGUAY	PARANA, YGUAZI RIVERS	25.5S 55.5W	24.2S 56.9W	15	LO	250	N	Y	19910409	201856	247	286 16 66
153	135	PARAGUAY	PARANA RIVER	26.0S 55.0W		40	LO	250	N	Y				
38	9	PERSIAN GULF	KUWAIT OIL WELL FIRES	29.0N 49.0E	27.4N 42.4E	20	LO	35	N	N	19910411	042714	244	91 20 87
38	10	PERSIAN GULF	KUWAIT OIL WELL FIRES	28.0N 49.0E	27.3N 43.6E	15	HO	35	N	N	19910411	042732	244	92 22 87
38	11	PERSIAN GULF	KUWAIT OIL WELL FIRES	28.0N 49.0E	27.2N 44.0E	10	LO	35	N	N	19910411	042738	244	92 22 87

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	NADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
38	12	PERSIAN GULF	KUWAIT OIL WELL FIRES	29.0N 49.0E	26.9N 45.8E	10	L0	35	N	N	19910411	042804	244	93	24	87
38	13	PERSIAN GULF	KUWAIT OIL WELL FIRES	29.0N 50.0E	26.7N 47.1E	10	L0	35	N	N	19910411	042825	245	93	25	87
38	14	PERSIAN GULF	KUWAIT OIL WELL FIRES	29.0N 49.0E	26.6N 47.5E	5	L0	35	N	N	19910411	042831	245	94	25	87
38	15	PERSIAN GULF	KUWAIT OIL WELL FIRES	30.0N 49.0E	26.6N 47.7E	10	L0	35	N	N	19910411	042833	245	94	25	87
38	16	PERSIAN GULF	KUWAIT OIL WELL FIRES	30.0N 50.0E	26.5N 47.9E	5	L0	35	N	N	19910411	042836	245	94	26	87
38	17	PERSIAN GULF	KUWAIT OIL WELL FIRES	30.0N 49.0E	26.1N 48.9E	5	L0	35	N	N	19910411	042907	245	94	28	87
38	19	PERSIAN GULF	KUWAIT OIL WELL FIRES	30.0N 49.0E	25.9N 51.0E	5	L0	35	N	N	19910411	042924	245	95	29	87
38	20	PERSIAN GULF	KUWAIT OIL WELL FIRES	30.0N 50.0E	25.8N 51.5E	5	L0	35	N	N	19910411	042932	245	95	29	87
151	128	PERSIAN GULF	SUNGLINT-OIL-SHIP WAKES	27.0N 52.0E	28.1N 49.9E	30	L0	250	N	N	19910406	060328	246	112	46	11
152	89	PERSIAN GULF	KUWAIT-KUWAIT OIL FIRES	29.0N 48.7E	28.5N 45.6E	0	L0	250	N	Y	19910407	052330	246	102	34	26
152	93	PERSIAN GULF	KUWAIT COAST-OIL SMOKE	28.5N 49.0E	28.3N 49.9E	0	NV	250	N	N	19910407	052432	246	104	38	26
10	9	PERU	COAST NEAR MOLLENDO	17.0S 73.0W	18.9S 71.1W	20	L0	35	N	N	19910410	193641	247	299	40	81
10	10	PERU	COAST NEAR MOLLENDO	18.0S 72.0W	19.0S 70.8W	20	L0	35	N	N	19910410	193647	247	298	40	81
10	11	PERU	COAST NEAR MOLLENDO	18.0S 72.0W	19.2S 70.3W	20	L0	35	N	N	19910410	193655	247	298	39	81
44	12	PERU	COAST	5.0S 80.0W	1.7S 80.4W	50	H0	70	N	N	19910410	175302	248	322	78	80
44	14	PERU	RIO NAPO, CLOUDS	1.0S 75.0W	2.7S 78.6W	75	L0	70	N	N	19910410	175337	248	319	76	80
44	15	PERU	AMAZON BASIN, CLOUDS	3.4S 77.6W	3.4S 77.6W	80	H0	70	N	N	19910410	175357	248	317	75	80
44	16	PERU	RIO AMAZON, CLOUDS	4.0S 72.0W	5.3S 74.2W	75	L0	70	N	Y	19910410	175502	248	313	71	80
44	17	PERU	RIO AMAZON, CLOUDS	4.0S 72.0W	5.5S 73.9W	75	L0	70	N	Y	19910410	175507	248	313	70	80
73	8	PERU	CHICLAYO, COAST, AGRICULT.	6.8S 79.5W	6.5S 79.6W	60	L0	250	N	N	19910406	202855	243	284	41	20
73	9	PERU	VERY CLOUDY	6.7S 79.3W	6.7S 79.3W	99	L0	250	N	N	19910406	202901	243	284	41	20
73	10	PERU	E. ANDES MTNS., HUALLAGA R	6.8S 76.8W	6.9S 78.9W	50	L0	250	N	N	19910406	202908	243	284	40	20
73	11	PERU	E. ANDES MTNS., HUALLAGA R	7.5S 76.6W	7.0S 78.7W	60	L0	250	N	N	19910406	202913	243	284	40	20
73	12	PERU	HUALLAGA R., YURIMAGUAS	6.3S 75.8W	7.2S 78.4W	60	L0	250	N	N	19910406	202919	243	284	39	20
73	13	PERU	HUALLAGA R., YURIMAGUAS	5.3S 75.7W	7.7S 77.5W	70	L0	250	N	N	19910406	202936	243	284	38	20
73	14	PERU	HUALLAGA & MARANON RIOS	5.0S 75.5W	8.1S 76.7W	60	L0	250	N	N	19910406	202950	243	284	37	20
73	15	PERU	UCAYALI & PACHITEA RIOS	8.9S 74.6W	8.3S 76.3W	60	L0	250	N	N	19910406	202957	243	284	37	20
73	16	PERU	RIO UCAYALI	9.5S 74.3W	8.4S 76.1W	50	L0	250	N	N	19910406	203001	243	284	37	20
73	17	PERU	TAMBO & URUBAMBA RIOS	10.8S 73.8W	8.5S 76.0W	60	L0	250	N	N	19910406	203004	243	284	37	20
73	18	PERU	RIO UCAYALI & PUCALLPA	8.0S 74.7W	9.2S 74.7W	60	L0	250	N	N	19910406	203027	243	284	35	20
73	19	PERU	RIO UCAYALI	7.8S 74.6W	9.4S 74.4W	80	L0	250	N	N	19910406	203034	243	284	35	20
73	20	PERU	RAINFOREST	9.5S 74.2W	9.5S 74.2W	70	L0	250	N	N	19910406	203037	243	284	35	20
73	21	PERU	RAINFOREST	9.6S 73.9W	9.6S 73.9W	80	L0	250	N	N	19910406	203042	243	284	34	20
73	22	PERU	RAINFOREST	10.0S 73.2W	10.0S 73.2W	70	L0	250	N	N	19910406	203055	243	284	33	20
73	23	PERU	RAINFOREST	10.2S 72.9W	10.2S 72.9W	60	L0	250	N	N	19910406	203101	243	284	33	20
73	24	PERU	RAINFOREST	10.4S 72.5W	10.4S 72.5W	70	L0	250	N	N	19910406	203108	243	284	33	20
73	25	PERU	RAINFOREST	10.9S 71.5W	10.9S 71.5W	90	L0	250	N	N	19910406	203127	243	284	31	20
73	26	PERU	RAINFOREST	11.3S 70.8W	11.3S 70.8W	60	L0	250	N	N	19910406	203140	243	284	31	20
73	27	PERU	EAST LOWLANDS	11.4S 70.5W	11.4S 70.5W	60	L0	250	N	N	19910406	203145	243	284	30	20
73	28	PERU	EAST LOWLANDS	11.6S 70.1W	11.6S 70.1W	60	L0	250	N	N	19910406	203152	243	284	30	20

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
73	29	PERU	MOUNTAINOUS TERRAIN		12.5S 68.4W	70	LO	250	N	N	19910406	203223	243	284	28	20
76	88	PERU	HIGH OBLIQUE, W. COAST		1.9S 81.8W	80	HO	250	N	N	19910409	183106	245	301	71	65
76	91	PERU	COAST, NEAR TUMBES		2.7S 80.4W	70	LO	250	N	N	19910409	183132	245	301	70	65
76	92	PERU	SECHURA DESERT	4.8S 81.0W	2.9S 80.1W	30	LO	250	N	N	19910409	183137	245	301	70	65
76	93	PERU	SECHURA DESERT	5.2S 80.8W	3.0S 80.0W	20	LO	250	N	N	19910409	183140	245	301	69	65
76	94	PERU	SECHURA DESERT	5.5S 80.8W	3.0S 79.9W	10	LO	250	N	N	19910409	183142	245	301	69	65
78	85	PERU	SECHURA DES., PT. AGUJA	6.5S 80.5W	4.3S 77.6W	25	LO	250	N	Y	19910409	183225	245	300	68	65
78	86	PERU	SECHURA DESERT	6.5S 80.5W	4.4S 77.5W	35	LO	250	N	Y	19910409	183227	245	300	66	65
78	87	PERU	COAST NEAR CHICLAYO	7.0S 80.0W	4.6S 77.1W	45	LO	250	N	Y	19910409	183235	245	300	66	65
78	88	PERU	COAST NEAR TRUJILLO	8.0S 79.0W	4.8S 76.9W	50	LO	250	N	Y	19910409	183239	245	300	65	65
78	89	PERU	COAST SOUTH OF TRUJILLO	8.5S 79.0W	4.8S 76.8W	50	LO	250	N	Y	19910409	183241	245	300	65	65
78	90	PERU	COAST NEAR FERRAL PEN.	9.0S 78.5W	4.9S 76.6W	55	LO	250	N	Y	19910409	183244	245	300	65	65
78	91	PERU	COAST SOUTH OF CHIMBOTE	9.5S 78.5W	5.0S 76.5W	60	LO	250	N	Y	19910409	183247	245	300	66	65
78	92	PERU	UPPER AMAZON BASIN		5.4S 75.7W	80	HO	250	N	N	19910409	183302	245	300	64	65
78	93	PERU	MARANON, HUALLAGA RIVERS	5.0S 75.5W	5.8S 75.0W	70	NV	250	U	Y	19910409	183315	245	300	63	65
78	94	PERU	MARANON, HUALLAGA RIVERS	5.5S 76.0W	6.1S 74.5W	70	NV	250	U	Y	19910409	183325	245	300	62	65
78	95	PERU	HUALLAGA RIVER	6.0S 75.5W	6.2S 74.3W	75	LO	250	U	Y	19910409	183328	245	300	62	65
78	96	PERU	UCAYALI RIVER		6.3S 74.1W	80	LO	250	U	N	19910409	183332	245	300	62	65
78	97	PERU	UCAYALI RIVER		6.5S 73.8W	80	LO	250	U	Y	19910409	183337	245	299	62	65
78	98	PERU	UCAYALI RIVER		6.6S 73.6W	85	LO	250	U	Y	19910409	183341	245	299	61	65
78	99	PERU	LAKE TITICACA	16.0S 69.5W	11.8S 64.0W	60	HO	250	N	N	19910409	183640	245	297	50	65
81	90	PERU	PERU COAST LOOKING SOUTH		4.0S 86.0W	65	HO	250	N	N	19910405	210557	242	281	39	5
81	91	PERU	SECHURA DESERT	6.0S 80.0W	4.1S 85.6W	60	LO	250	N	N	19910405	210603	242	281	38	5
81	92	PERU	SECHURA DESERT	5.0S 80.5W	4.8S 84.4W	65	LO	250	N	N	19910405	210626	242	281	37	5
81	93	PERU	SECHURA DESERT	6.0S 80.5W	5.0S 84.1W	35	LO	250	N	N	19910405	210632	242	281	37	5
81	94	PERU	SECHURA DESERT	6.5S 80.5W	5.2S 83.9W	20	LO	250	N	N	19910405	210637	242	281	36	5
81	95	PERU	SECHURA DESERT	5.0S 81.0W	6.3S 81.9W	40	NV	250	N	N	19910405	210714	242	281	34	5
81	96	PERU	SECHURA DESERT	6.0S 80.5W	6.4S 81.7W	5	NV	250	N	Y	19910405	210718	242	281	34	5
81	97	PERU	SECHURA DESERT	6.5S 80.5W	6.6S 81.4W	20	NV	250	N	Y	19910405	210724	242	281	33	5
81	98	PERU	COAST NEAR CHICLAYO	7.0S 80.0W	6.8S 81.0W	60	LO	250	N	N	19910405	210731	242	281	33	5
81	99	PERU	COAST NEAR PACASMAYO	7.5S 79.5W	7.4S 80.0W	65	LO	250	N	N	19910405	210750	242	282	32	5
81	100	PERU	COAST S. OF TRUJILLO	8.5S 79.0W	7.4S 79.9W	40	LO	250	N	N	19910405	210752	242	282	32	5
81	101	PERU	FERROL PENINSULA	9.0S 78.5W	7.5S 79.7W	20	LO	250	N	N	19910405	210756	242	282	31	5
81	102	PERU	COAST S. OF FERROL PEN.	9.5S 78.5W	7.6S 79.5W	50	LO	250	N	N	19910405	210759	242	282	31	5
81	103	PERU	PERU ANDES MTNS.		7.8S 79.2W	80	NV	250	N	N	19910405	210805	242	282	31	5
81	104	PERU	COAST NEAR CULEBRAS	9.5S 78.0W	8.8S 77.4W	55	LO	250	N	N	19910405	210838	242	282	29	5
81	105	PERU	COAST NEAR HUARNEY	10.0S 78.0W	8.9S 77.2W	55	LO	250	N	N	19910405	210843	242	282	29	5
81	106	PERU	COAST NEAR PT. LACHAY	11.0S 77.5W	9.1S 76.7W	35	LO	250	N	N	19910405	210851	242	282	28	5
81	107	PERU	COAST S. OF LIMA	12.5S 76.5W	10.6S 74.1W	45	LO	250	N	N	19910405	210940	242	282	25	5
81	108	PERU	COAST N. OF PARACAS PEN.	13.5S 76.0W	10.6S 74.0W	30	LO	250	N	N	19910405	210942	242	282	25	5

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	LONG	MADIR LAT	LONG	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
91	80	PERU	COAST	7.0S	80.0W	7.1S	80.5W	40	LO	250	N	N	19910405	210741	242	282	32	5
91	81	PERU	ANDES, CLOUDS			8.1S	78.7W	75	LO	250	N	N	19910405	210815	242	282	30	5
91	82	PERU	COAST, PUNTA LACHAY	11.0S	77.5W	9.4S	76.4W	50	LO	250	N	N	19910405	210858	242	282	27	5
91	83	PERU	ANDES, CLOUDS			9.7S	75.7W	70	LO	250	N	Y	19910405	210910	242	282	27	5
91	84	PERU	ANDES, CLOUDS			9.8S	75.5W	80	LO	250	N	Y	19910405	210914	242	282	26	5
91	85	PERU	ANDES, CLOUDS			10.0S	75.2W	60	LO	250	N	Y	19910405	210920	242	282	26	5
91	86	PERU	LAKE TITICACA, DARK	16.0S	70.0W	13.4S	68.6W	70	LO	250	U	Y	19910405	211121	243	281	19	5
91	87	PERU	LAKE TITICACA, DARK	15.5S	69.5W	13.5S	68.4W	75	LO	250	U	Y	19910405	211124	243	281	18	5
92	25	PERU	RIO MARDE DE DIOS	12.5S	70.0W	11.3S	70.8W	80	LO	250	N	N	19910406	203139	243	284	31	20
92	26	PERU	RIO MARDE DE DIOS	12.5S	70.0W	11.6S	70.2W	90	LO	250	N	N	19910406	203151	243	284	30	20
92	27	PERU	RIO MARDE DE DIOS	12.5S	70.0W	11.9S	69.5W	90	LO	250	N	N	19910406	203203	243	284	29	20
93	1	PERU	CABALLAS, ST. NICHOLS B.	15.0S	75.5W	12.0S	71.4W	25	LO	250	N	N	19910405	211030	243	281	22	5
93	2	PERU	ACARI, YAUCA CANYONS	15.5S	74.5W	12.1S	71.2W	30	LO	250	N	Y	19910405	211033	243	281	22	5
93	3	PERU	CHAPARRA CANYON	16.0S	74.0W	12.2S	71.0W	20	LO	250	N	Y	19910405	211036	243	281	22	5
93	4	PERU	OCONA, COTAHUASI CANYONS	15.5S	73.0W	12.2S	70.9W	10	LO	250	N	Y	19910405	211039	243	281	21	5
93	5	PERU	COROPUNA VOL., CAMANA	16.0S	72.5W	12.3S	70.7W	15	LO	250	N	Y	19910405	211042	243	281	21	5
93	6	PERU	AMPATO, CHACHANI VOLCANO	16.0S	72.0W	12.4S	70.5W	15	LO	250	N	Y	19910405	211045	243	281	21	5
93	7	PERU	EL MISTI VOL., SALT LAKE	16.0S	71.5W	12.5S	70.3W	30	LO	250	N	Y	19910405	211049	243	281	21	5
93	8	PERU	AMPATO VOL., MOLES CAN.	15.5S	72.0W	12.6S	70.1W	40	LO	250	N	Y	19910405	211053	243	281	20	5
93	9	PERU	SOLIMANA, COROPUNA MTNS.	15.5S	73.0W	12.7S	69.9W	40	LO	250	N	Y	19910405	211056	243	281	20	5
93	10	PERU	LAKE TITICACA	15.5S	69.5W	13.0S	69.3W	65	LO	250	N	N	19910405	211107	243	281	20	5
152	72	PERU	POINT AGUJA, SECHURA BAY	6.0S	81.0W	5.5S	81.3W	20	NV	250	N	N	19910406	202823	243	284	43	20
153	70	PERU	COAST S. OF SAN JUAN BAY	16.0S	74.5W	17.3S	78.5W	10	LO	250	N	N	19910409	201332	247	294	37	66
153	71	PERU	ATICO, OCONA RIVERS	16.5S	74.0W			15	LO	250	N	Y						
153	72	PERU	OCONA, CARAVELI RIVERS	16.5S	73.5W	17.6S	75.7W	20	LO	250	N	Y	19910409	201346	247	294	36	66
153	73	PERU	OCONA, CAMANA RIVERS	17.0S	73.0W	17.9S	75.0W	15	LO	250	N	Y	19910409	201358	247	294	35	66
153	74	PERU	CAMANA, TAMBO RIVERS	17.5S	72.5W			15	LO	250	N	Y						
153	75	PERU	COAST N. OF PT. COLES	18.0S	72.5W	18.3S	74.1W	15	LO	250	N	Y	19910409	201413	247	293	34	66
153	76	PERU	POINT COLES, DUST	18.0S	71.5W			15	LO	250	N	Y						
153	77	PERU	POINT COLES, ARICA	18.5S	71.0W	18.6S	73.2W	15	LO	250	N	Y	19910409	201429	247	293	33	66
85	33	PHILIPPINE SEA	UNDER EXPOSED, SUNGLINT			26.4N	139.8E	50	LO	250	N	N	19910408	233115	246	103	40	53
72	68	PHILIPPINES	BUSUANGA I.-SHUTTLE TAIL			19.7N	113.7E	90	HO	100	N	Y	19910405	220211	245	81	-4	6
72	69	PHILIPPINES	BUSUANGA I.-SHUTTLE TAIL			19.9N	114.1E	90	HO	100	N	Y	19910405	220217	245	82	-3	6
72	70	PHILIPPINES	BUSUANGA I.-SHUTTLE TAIL			20.0N	114.4E	90	HO	100	N	Y	19910405	220223	245	82	-3	6
72	71	PHILIPPINES	SHUTTLE TAIL-UNDEREXPOSED			20.1N	114.8E	90	HO	100	U	Y	19910405	220229	245	82	-3	6
72	72	PHILIPPINES	SHUTTLE TAIL-CLOUDS			20.2N	114.8E	90	HO	100	U	Y	19910405	220230	245	82	-3	6
72	73	PHILIPPINES	SHUTTLE TAIL-CLOUDS			20.6N	116.0E	95	HO	100	N	Y	19910405	220250	245	82	-1	6
72	74	PHILIPPINES	SHUTTLE TAIL-CLOUDS			20.8N	116.5E	80	HO	100	N	Y	19910405	220257	245	82	-1	6
72	75	PHILIPPINES	SHUTTLE TAIL-CLOUDS			20.9N	116.9E	80	HO	100	N	Y	19910405	220305	245	83	-0	6
72	76	PHILIPPINES	SHUTTLE TAIL-CLOUDS			21.2N	117.6E	80	HO	100	O	Y	19910405	220316	245	83	-0	6

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		NADIR		CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN	EL	OR
				LAT	LONG	LAT	LONG												
151	108	PHILIPPINES	LUZON-LINGAYEN GULF	16.0N	120.0E	15.4N	119.7E	25	NV	250	N	Y	19910406	044213	244	226	76	10	
151	109	PHILIPPINES	LUZON-SUNGLINT	15.0N	120.0E	15.2N	119.9E	20	NV	250	N	Y	19910406	044218	244	231	76	10	
151	110	PHILIPPINES	LUZON-SHIP WAKES	15.0N	120.0E	14.9N	120.6E	25	NV	250	N	Y	19910406	044230	244	227	76	10	
151	111	PHILIPPINES	LUZON-CABALETE ISLAND	14.0N	122.0E	14.4N	121.8E	40	NV	250	N	Y	19910406	044251	244	236	75	10	
151	112	PHILIPPINES	LUZON-RAGAY GULF-SUNGLIN	13.5N	123.0E	13.5N	123.5E	25	NV	250	N	Y	19910406	044321	244	242	74	10	
151	113	PHILIPPINES	LUZON-MANILLA BAY	14.5N	121.0E	12.6N	125.4E	25	LO	250	N	N	19910406	044356	244	249	73	10	
151	114	PHILIPPINES	SAMAR	12.0N	125.0E	10.9N	128.6E	20	LO	250	N	Y	19910406	044454	244	257	70	10	
152	136	PHILIPPINES	CULION I.-MINDOR-PANAY	12.0N	120.0E	4.7N	117.9E	30	HO	250	N	Y	19910407	054325	244	275	66	26	
152	137	PHILIPPINES	CEBU-NEGROS-BOHO-LEYTE	11.5N	124.0E	4.3N	118.6E	40	HO	250	N	Y	19910407	054339	244	276	66	26	
152	139	PHILIPPINES	LEYTE-CEBU-BOHO	11.0N	125.0E	3.1N	120.7E	50	HO	250	N	Y	19910407	054418	243	278	63	26	
153	183	PHILIPPINES	PALAWAN, DBL EXPOSURE	8.0N	116.0E	9.3N	115.4E	15	LO	250	O	N	19910410	034543	247	99	81	71	
153	186	PHILIPPINES	MINDANAO, ILLANA BAY	6.5N	124.0E	6.2N	120.9E	25	LO	250	N	N	19910410	034727	247	57	87	71	
153	187	PHILIPPINES	SULU ACHIP., SPIR. EDDIES	6.5N	121.5E	5.8N	121.7E	30	NV	250	N	N	19910410	034741	247	39	87	71	
74	39	PUERTO RICO	ISLAND CLOUDY	18.0N	66.5W	6.1N	22.2W	60	LO	250	N	N	19910409	133544	245	105	47	62	
76	35	PUERTO RICO	MONA PASSAGE	18.0N	67.7W	8.1N	50.5W	50	LO	250	N	N	19910409	151446	244	112	72	63	
76	36	PUERTO RICO	WESTERN 2/3 ISLAND	18.2N	66.8W	8.1N	50.5W	50	LO	250	N	N	19910409	151449	244	112	72	63	
76	37	PUERTO RICO		18.0N	66.4W	8.2N	50.6W	50	LO	250	N	N	19910409	151452	244	113	72	63	
76	38	PUERTO RICO	EASTERN HALF IS.	18.2N	65.8W	8.2N	50.7W	50	LO	250	N	N	19910409	151457	244	113	73	63	
78	49	PUERTO RICO	PONCE, WEST HALF OF IS.	18.5N	66.5W	7.7N	49.6W	30	LO	250	N	N	19910409	151415	244	112	70	63	
78	50	PUERTO RICO	ROOSEVELT ROADS, VIEQUES	18.0N	65.5W	7.8N	49.8W	25	LO	250	N	N	19910409	151420	244	112	70	63	
83	74	PUERTO RICO	ENTIRE ISLAND-CLOUDY	18.5N	66.5W	7.5N	49.2W	40	LO	100	N	N	19910409	151400	244	112	69	63	
87	75	PUERTO RICO	CLOUD COVERED, DARK	18.0N	66.5W	4.9N	19.2W	70	LO	250	U	N	19910409	133409	245	104	45	62	
8	28	RED SEA	SE EGYPT, HIJAZ MASSIVE	26.0N	35.5E	23.5N	34.7E	5	LO	35	N	N	19910410	064308	246	102	44	73	
8	29	RED SEA		24.0N	37.0E	23.4N	35.3E	5	LO	35	N	N	19910410	064317	246	103	45	73	
8	30	RED SEA	HIJAZ MASSIVE	25.0N	37.0E	23.1N	36.2E	0	LO	35	N	N	19910410	064332	246	103	46	73	
8	31	RED SEA	HIJAZ MASSIVE	24.0N	37.0E	22.8N	37.0E	5	LO	35	N	N	19910410	064345	246	103	47	73	
8	32	RED SEA	HIJAZ MASSIVE	24.0N	37.0E	22.7N	37.5E	5	LO	35	N	N	19910410	064353	246	103	47	73	
8	35	RED SEA	PANORAMA, N. SUDAN	24.0N	37.0E	21.5N	41.1E	30	HO	35	N	N	19910410	064451	246	104	51	73	
12	2	RED SEA	STRAIT OF MANDEB, G. ADEN	13.0N	44.0E	19.9N	45.5E	10	HO	35	N	N	19910410	064604	246	106	56	73	
38	37	RED SEA	ARABIAN D., SINAI PEN.	25.0N	36.0E	24.6N	32.6E	35	LO	35	N	N	19910411	060417	245	97	34	88	
56	10	RED SEA	VIEW NORTH	19.0N	39.0E	12.3N	40.0E	15	HO	35	N	N	19910411	C74637	248	98	66	89	
73	103	RED SEA	SHIP WAKES, OIL SLICKS			19.8N	39.8E	20	LO	250	N	N	19910407	084108	245	140	73	28	
73	104	RED SEA	SUN GLINT, SURFACE PATTERN			19.6N	40.1E	20	LO	250	N	N	19910407	084113	245	140	73	28	
94	81	RED SEA	OBLIQUE LOOKING N. SINAI	24.5N	36.0E			10	HO	100	N	Y							
94	82	RED SEA	OBLIQUE LOOKING N. SINAI	24.0N	37.0E			15	HO	100	N	Y							
97	32	RED SEA	VIEW SOUTHEAST			20.0N	37.2E	30	HO	250	N	N	19910406	091925	245	165	75	13	
151	91	D RED SEA	SAUDI ARABIA COAST	26.0N	36.0E	25.2N	35.6E	90	NV	250	N	N	19910406	042038	246	88	11	10	
151	223	RED SEA	SUNGLINT-OFF COAST SAUDI			19.6N	38.2E	10	LO	250	N	Y	19910406	091942	245	169	76	13	
151	224	RED SEA	CENTRAL SAUDI COAST	18.5N	40.0E	19.1N	39.4E	10	LO	250	N	Y	19910406	092002	245	174	77	13	
152	174	RED SEA	TIP OF SINAI PEN.-TIRAN	27.5N	34.5E	27.3N	35.5E	0	NV	250	N	Y	19910407	070018	246	110	46	27	



TABLE 4-4. STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		NADIR		CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN	OR
				LAT	LOW	LAT	LOW										EL	
1152	175	RED SEA	TIP OF SINAI PEN.-EGYPT	27.5N	34.5E	27.2N	35.9E	0	LO	250	N	Y	19910407	070025	246	111	47	27
15	19	REPUBLIC SOUTH AFRICA	NORTHERN DRAKENSBURG			22.0S	32.6E	25	LO	35	N	N	19910410	132503	246	294	30	77
15	20	REPUBLIC SOUTH AFRICA	NORTHERN DRAKENSBURG			22.1S	33.1E	50	LO	35	N	N	19910410	132511	246	293	29	77
15	21	REPUBLIC SOUTH AFRICA	NORTHERN DRAKENSBURG			22.4S	33.9E	60	LO	35	N	N	19910410	132524	246	293	28	77
74	98	REPUBLIC SOUTH AFRICA	NEAR SWAZILAND	28.0S	31.3E	24.5S	39.8E	0	LO	250	N	N	19910409	140534	244	286	17	62
74	99	REPUBLIC SOUTH AFRICA	NEAR SWAZILAND	28.8S	31.5E	24.5S	40.0E	5	LO	250	N	N	19910409	140537	244	286	17	62
76	70	REPUBLIC SOUTH AFRICA	S. KALAHARI DESERT	27.5S	20.8E	25.6S	21.0E	0	LO	250	N	N	19910409	154012	245	283	9	63
76	71	REPUBLIC SOUTH AFRICA	MOLOPO RIVER	26.8S	22.1E	25.7S	21.4E	0	LO	250	N	N	19910409	154018	245	283	9	63
76	72	REPUBLIC SOUTH AFRICA	JUNCTION MOSSOB.	26.8S	20.9E	25.9S	22.1E	0	LO	250	N	N	19910409	154030	245	282	8	63
76	73	REPUBLIC SOUTH AFRICA	MOLOPO R	26.8S	20.9E	25.9S	22.1E	0	LO	250	N	N	19910409	154037	245	282	8	63
76	74	REPUBLIC SOUTH AFRICA				26.0S	22.7E	0	LO	250	N	N	19910409	154039	245	282	8	63
76	75	REPUBLIC SOUTH AFRICA				26.1S	22.9E	0	LO	250	N	N	19910409	154042	245	282	7	63
76	76	REPUBLIC SOUTH AFRICA				26.1S	23.1E	0	LO	250	N	N	19910409	154045	245	282	7	63
83	86	REPUBLIC SOUTH AFRICA	KALAHARI DES.SALT PANS	28.0S	20.5E	24.3S	15.5E	0	LO	100	N	N	19910409	153847	245	285	15	63
83	88	REPUBLIC SOUTH AFRICA	KURUMAN HEWELL, LANGE BERG	28.0S	25.0E	25.3S	19.4E	0	LO	100	N	N	19910409	153948	245	283	11	63
87	113	REPUBLIC SOUTH AFRICA	LIMPOPO R/VALLEY, DARK			19.6S	24.7E	60	HO	250	U	N	19910409	140128	244	291	29	62
153	38	REPUBLIC SOUTH AFRICA	MOUTH OF ORANGE RIVER	28.5S	17.0E	24.8S	17.1E	5	LO	250	N	N	19910409	153913	245	284	13	63
153	40	REPUBLIC SOUTH AFRICA	GREAT KARROO, ORANGE R.	30.5S	19.5E	25.4S	19.9E	0	LO	250	N	N	19910409	153955	245	283	10	63
153	41	REPUBLIC SOUTH AFRICA	ST. HELEN BAY, CAPE TOWN	33.0S	19.5E			20	HO	250	N	N						
74	16	REUNION	VRY CLDY OVER ISLAND	21.0S	55.5E	22.6S	57.2E	60	LO	250	N	N	19910409	123027	245	289	23	61
74	17	REUNION		21.0S	55.5E	22.7S	57.5E	60	LO	250	N	N	19910409	123032	245	288	23	61
74	18	REUNION	VRY CLDY OVER ISLAND	21.0S	55.5E	23.0S	58.3E	60	LO	250	N	N	19910409	123045	245	288	22	61
74	19	REUNION	VRY CLDY OVER ISLAND	21.0S	55.5E	23.1S	58.7E	60	LO	250	N	N	19910409	123050	245	288	22	61
87	68	REUNION	CLOUD COVERED	21.2S	55.6E	21.9S	55.1E	50	LO	250	N	N	19910409	122952	245	288	22	61
89	39	RODRIGUES	ENTIRE ISLAND/CORAL REEF	19.7S	63.3E	17.4S	65.2E	60	LO	250	N	N	19910408	113135	244	288	28	45
8	34	SAUDI ARABIA	N. HIJAZ MASSIVE	26.0N	38.0E	21.7N	40.3E	40	LO	35	N	N	19910410	064439	246	104	50	73
12	1	SAUDI ARABIA	EMPTY QUARTER	16.0N	46.0E	20.1N	44.9E	5	LO	35	N	N	19910410	064554	246	105	55	73
12	3	SAUDI ARABIA	DISSECTED PLAT., G. ADEN	15.0N	48.0E	19.5N	46.5C	5	HO	35	N	N	19910410	064621	247	106	57	73
12	4	SAUDI ARABIA	EMPTY QUARTER, G. ADEN	17.0N	52.0E	19.2N	47.0E	5	HO	35	N	N	19910410	064630	247	106	57	73
12	8	SAUDI ARABIA	EMPTY QUARTER	16.0N	48.0E	18.2N	49.6E	0	LO	35	N	N	19910410	064714	247	106	60	73
38	6	SAUDI ARABIA	MAFUD DESERT, SMOKE PL.	30.0N	43.0E	28.3N	34.6E	20	HO	35	N	N	19910411	042518	244	88	13	87
38	21	SAUDI ARABIA	AB-JABAYL, DHAHRAN	26.0N	50.0E	25.7N	51.9E	5	LO	35	N	N	19910411	042938	245	95	30	87
41	5	SAUDI ARABIA	EMPTY QUARTER	23.0N	54.0E	14.8N	58.8E	15	HO	35	N	N	19910411	061136	247	100	61	88
41	6	SAUDI ARABIA	EMPTY QUARTER	19.0N	51.0E	14.7N	59.0E	5	HO	35	N	N	19910411	061140	247	100	61	88
56	9	SAUDI ARABIA	EMPTY QUARTER	17.0N	46.0E	12.5N	39.5E	15	HO	35	N	N	19910411	074628	247	98	66	89
56	11	SAUDI ARABIA	DISSECTED PLATEAU	16.0N	47.0E	11.8N	41.0E	5	HO	35	N	N	19910411	074655	248	97	68	89
56	12	SAUDI ARABIA	EMPTY QUARTER	17.0N	46.0E	11.5N	41.5E	5	LO	35	N	N	19910411	074704	248	97	68	89
56	13	SAUDI ARABIA	HIJAZ MASSIF	15.0N	45.0E	11.4N	41.7E	20	LO	35	N	N	19910411	074707	248	96	68	89
56	14	SAUDI ARABIA	HIJAZ MASSIF, ADEN	14.0N	44.0E	10.6N	43.2E	20	LO	35	N	N	19910411	074736	248	95	70	89
73	49	SAUDI ARABIA	DHAHRAN AREA	26.6N	50.1E	23.7N	52.1E	10	LO	250	N	N	19910407	070433	246	124	62	27

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
73	53	SAUDI ARABIA	E. TIP RUB AL KHALI	21.5N 39.2E	21.5N 59.0E	0	LO	250	N	N	19910407	070624	246	133	69	27
82	91	SAUDI ARABIA	JIDDAH, MECCA, COAST	21.5N 39.2E	21.5N 59.0E	5	LO	250	N	Y	19910406	091945	245	189	76	13
82	92	SAUDI ARABIA	MECCA, RED SEA COAST	21.0N 39.8E	19.4N 38.8E	0	LO	250	N	Y	19910406	091952	245	171	76	13
82	93	SAUDI ARABIA	HIJAZ MTHS, RED SEA COAST	20.4N 40.0E	19.3N 39.0E	0	LO	250	N	Y	19910406	091955	245	172	76	13
82	94	SAUDI ARABIA	HIJAZ MTHS, RED SEA COAST	20.6N 40.5E	19.2N 39.2E	10	LO	250	N	Y	19910406	091958	245	173	77	13
82	95	SAUDI ARABIA	HIJAZ MTHS, RED SEA COAST	19.6N 41.1E	19.1N 39.4E	15	LO	250	N	Y	19910406	092002	245	174	77	13
82	96	SAUDI ARABIA	HIJAZ MTHS, AHSIBAH WADI	19.6N 41.5E	18.8N 40.3E	15	LO	250	N	Y	19910406	092017	245	178	77	13
82	97	SAUDI ARABIA	HIJAZ MTHS, QANUNAH WADI	19.0N 41.8E	18.7N 40.5E	20	LO	250	N	Y	19910406	092020	245	179	77	13
82	98	SAUDI ARABIA	HIJAZ MTHS, CST. OC. EDDY	17.7N 42.3E	18.2N 41.6E	10	LO	250	N	N	19910406	092040	245	185	78	13
82	99	SAUDI ARABIA	HIJAZ MTHS, WADI DAMAD	17.5N 43.0E	17.6N 43.1E	30	NV	250	N	N	19910406	092105	245	193	78	13
82	100	SAUDI ARABIA	TUMAYQ IRRIG. AREA	20.0N 45.0E	17.0N 44.6E	0	LO	250	N	N	19910406	092131	245	201	78	13
82	101	SAUDI ARABIA	BAHR AS SAFI	16.6N 45.4E	16.6N 45.4E	20	LO	250	N	Y	19910406	092145	245	206	78	13
82	102	SAUDI ARABIA	BAHR AS SAFI	16.4N 45.7E	16.4N 45.7E	20	LO	250	N	Y	19910406	092151	245	208	78	13
90	11	SAUDI ARABIA	JIDDAH(PART), COAST	22.0N 39.0E	19.7N 37.9E	15	LO	250	N	Y	19910406	091936	245	167	76	13
90	12	SAUDI ARABIA	JIDDAH, COAST	21.3N 39.0E	19.5N 38.5E	20	LO	250	N	Y	19910406	091947	245	170	76	13
90	13	SAUDI ARABIA	BARRIER REEF, COAST	20.3N 40.1E	19.0N 39.8E	0	LO	250	N	N	19910406	092009	245	176	77	13
90	14	SAUDI ARABIA	FARASAN IS, RED SEA, CST	16.5N 41.5E	17.7N 42.8E	10	LO	250	N	N	19910406	092100	245	191	78	13
90	15	SAUDI ARABIA	TUWAQ IRRIG. PROJECT	20.0N 44.7E	17.0N 44.4E	0	LO	250	N	N	19910406	092128	245	200	78	13
90	16	SAUDI ARABIA	TUWAQ IRR. DUNE FIELD	19.6N 45.3E	16.6N 45.3E	0	LO	250	N	N	19910406	092144	245	206	78	13
92	45	SAUDI ARABIA	OIL WELL SMOKE PLUMES	28.0N 48.0E	25.3N 45.7E	0	LO	250	N	N	19910407	070253	246	118	56	27
92	46	SAUDI ARABIA	AL JUBAYL AREA	27.0N 49.0E	24.6N 48.5E	0	LO	250	N	N	19910407	070337	246	121	59	27
92	48	SAUDI ARABIA	OIL WELL SMOKE PLUMES	28.0N 47.5E	24.3N 49.8E	0	LO	250	N	N	19910407	070357	246	122	60	27
92	86	SAUDI ARABIA	NAJRAN AREA, CULT. IRRIGAT	17.5N 44.2E	18.0N 44.2E	0	LO	250	N	N	19910407	084223	245	152	77	28
92	87	SAUDI ARABIA	NAJRAN AREA, CULT. IRRIGAT	17.3N 44.7E	17.6N 45.0E	0	LO	250	N	N	19910407	084238	245	155	78	28
94	55	SAUDI ARABIA	KUWAIT OIL WELL FIRES	28.0N 48.5E		15	HO	100	N	N						
94	56	SAUDI ARABIA	KUWAIT OIL WELL FIRES	27.0N 48.0E		15	HO	100	N	N						
94	76	SAUDI ARABIA	G. OF AQABA, NAFUD DES.	30.0N 39.0E		0	HO	100	N	Y						
97	31	SAUDI ARABIA	MASSIVE, EMPTY QUARTER	17.0N 45.0E	19.3N 38.9E	95	HO	250	N	N	19910406	091917	245	163	75	13
97	33	SAUDI ARABIA	EMPTY QUARTER	17.0N 46.0E	18.6N 40.6E	30	LO	250	N	N	19910406	091954	245	172	76	13
97	34	SAUDI ARABIA	EMPTY QUARTER	17.0N 46.0E	18.6N 40.6E	10	LO	250	N	N	19910406	092023	245	180	77	13
97	35	SAUDI ARABIA	YEMEN (ADEN), GULF ADEN	14.5N 47.9E	18.2N 41.6E	5	HO	250	N	N	19910406	092040	245	185	78	13
97	36	SAUDI ARABIA	EMPTY QTR., YEMEN(ADEN)	16.5N 46.5E	18.0N 42.2E	5	LO	250	N	N	19910406	092049	245	188	78	13
97	41	SAUDI ARABIA	RUB AL KHALI	15.1N 48.6E	15.1N 48.6E	0	HO	250	N	N	19910406	082241	244	224	77	13
98	1	SAUDI ARABIA	COAST, RED SEA, JIZAN AREA	16.5N 43.0E	18.2N 43.6E	0	LO	250	N	N	19910407	084212	245	150	76	28
98	3	SAUDI ARABIA	EMPTY QTR., LONG DUNES	17.8N 44.6E	17.8N 44.6E	0	LO	250	N	N	19910407	084230	245	154	77	28
98	5	SAUDI ARABIA	EMPTY QUARTER	16.9N 46.7E	16.9N 46.7E	5	LO	250	N	N	19910407	084307	245	163	79	28
98	6	SAUDI ARABIA	EMPTY QUARTER	16.3N 47.8E	16.3N 47.8E	5	LO	250	N	N	19910407	084328	245	169	80	28
151	92	SAUDI ARABIA	COAST-JIDDAH	22.0N 39.0E	25.9N 39.0E	60	HO	250	N	N	19910406	042129	246	90	14	10
151	93	SAUDI ARABIA	MAZHUR IRRIGATION PROJEC	26.0N 44.0E	26.7N 42.9E	50	LO	250	N	N	19910406	042228	246	92	18	10
151	94	SAUDI ARABIA	ZAWAR POINT-COAST	28.0N 49.5E	27.7N 48.7E	60	NV	250	N	Y	19910406	042409	246	96	24	10

TABLE 4.4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	CENTER LON	NADIR LAT	NADIR LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL	OR
151	95	SAUDI ARABIA	ABU ALI ISLAND	27.0N	50.0E	27.8N	50.4E	60	NV	250	N	Y	19910406	042420	246	96	25	10
151	125	SAUDI ARABIA	HAIL-PIVOT IRR-JABAL AJA	27.0N	41.0E	28.5N	42.6E	20	LO	250	N	N	19910406	060141	246	106	39	11
151	126	SAUDI ARABIA	LAKE-DUNES-CLOUDS			28.5N	43.8E	50	LO	250	N	N	19910406	060158	246	107	40	11
151	126	SAUDI ARABIA	PERSTAN GULF COAST-SUNGL	27.5N	49.0E	28.4N	45.8E	30	LO	250	N	N	19910406	060230	246	109	42	11
151	129	SAUDI ARABIA	ABU ALI ISLAND-COAST	28.0N	49.0E	28.0N	51.5E	40	LO	250	N	N	19910406	060352	246	113	47	11
151	162	SAUDI ARABIA	TUMAYQ PIVOT IRRIGATION	25.0N	45.5E	25.2N	44.3E	10	NV	250	N	Y	19910406	074129	246	129	62	12
151	163	SAUDI ARABIA	TUMAYQ PIVOT IRRIGATION	24.5N	45.5E	25.0N	45.0E	10	NV	250	N	Y	19910406	074140	246	130	63	12
151	164	SAUDI ARABIA	TUMAYQ PIVOT IRR.-RIYAD	24.0N	47.0E	24.7N	46.3E	10	NV	250	N	Y	19910406	074159	246	132	64	12
151	165	SAUDI ARABIA	AL HUFUF-DUNES-PIVOT IRR	25.5N	49.0E	24.4N	47.4E	15	LO	250	N	Y	19910406	074216	246	133	65	12
151	166	SAUDI ARABIA	GULF OF BAHRAIN-AL HUFUF	25.5N	50.0E	24.1N	48.7E	15	LO	250	N	Y	19910406	074237	246	135	66	12
151	167	SAUDI ARABIA	AD DAKHA SANDSEA-PIVOT I	23.5N	48.5E	23.6N	50.4E	5	LO	250	N	N	19910406	074304	246	138	67	12
151	168	SAUDI ARABIA	AL JAFURAH-SALWAH BAY	24.0N	50.5E	23.3N	51.3E	5	LO	250	N	N	19910406	074318	246	140	68	12
151	169	SAUDI ARABIA	OIL CAMPS-DUNES	24.0N	53.0E	23.0N	52.2E	10	NV	250	N	N	19910406	074333	246	142	69	12
151	170	SAUDI ARABIA	RUB AL KHALI	22.5N	54.0E	22.7N	53.4E	5	NV	250	N	N	19910406	074352	245	144	70	12
151	225	SAUDI ARABIA	COAST-QUTU ISLAND	18.5N	41.0E	18.7N	40.6E	20	NV	250	N	Y	19910406	092022	245	179	77	13
151	226	SAUDI ARABIA	HIBATA-SUNGLINT	18.0N	42.5E	18.2N	41.8E	15	NV	250	N	Y	19910406	092042	245	185	78	13
151	227	SAUDI ARABIA	FARASAN ISLANDS	16.0N	42.0E	17.7N	42.9E	15	LO	250	N	N	19910406	092101	245	191	78	13
151	228	SAUDI ARABIA	WADI IDIMAH	18.5N	44.0E	17.5N	43.3E	35	LO	250	N	Y	19910406	092108	245	194	78	13
151	229	SAUDI ARABIA	WADI NAJRAN-NAIRAN	17.5N	44.0E	17.2N	44.1E	30	NV	250	N	Y	19910406	092122	245	198	78	13
151	230	SAUDI ARABIA	TUMAYQ IRRIGATION	20.0N	45.0E	17.0N	44.5E	5	LO	250	N	N	19910406	092129	245	201	78	13
152	84	SAUDI ARABIA	AL HIJAZ	27.5N	36.5E	28.4N	36.6E	0	NV	250	N	N	19910407	052119	246	96	26	26
152	85	SAUDI ARABIA	AL HARRAH-VOLCANIC FIELD	30.5N	38.5E	28.5N	38.0E	0	LO	250	N	N	19910407	052139	246	97	27	26
152	86	SAUDI ARABIA	WADIS, SMOKE FROM KUWAIT	29.5N	42.5E	28.5N	41.4E	0	LO	250	N	N	19910407	052229	246	99	30	26
152	87	SAUDI ARABIA	PIVOT IRR.-KUWAIT SMOKE	27.0N	47.5E	28.5N	42.7E	15	LO	250	N	Y	19910407	052247	246	100	31	26
152	88	SAUDI ARABIA	COAST-KUWAIT OIL FIRES	28.5N	48.5E	28.5N	44.0E	0	LO	250	N	Y	19910407	052307	246	101	33	26
152	176	SAUDI ARABIA	AR RAHA VOL. FIELD-TABUK	28.0N	36.5E	27.1N	36.5E	0	NV	250	N	Y	19910407	070034	246	111	47	27
152	177	SAUDI ARABIA	AR RAHA VOL. FIELD-TABUK	27.5N	37.0E	27.0N	37.0E	0	NV	250	N	Y	19910407	070041	246	111	48	27
152	178	SAUDI ARABIA	AL HUFRAH-WADI FAIR	29.0N	38.0E	26.8N	38.3E	0	LO	250	N	Y	19910407	070101	246	112	49	27
152	180	SAUDI ARABIA	AJA MNTS.-PIVOT IRRIGATI	27.5N	41.5E	26.2N	41.7E	0	LO	250	N	Y	19910407	070151	246	115	52	27
152	181	SAUDI ARABIA	SALMA MNTS.-PIVOT IRR.	27.0N	42.5E	26.1N	42.0E	0	LO	250	N	Y	19910407	070157	246	115	52	27
152	182	SAUDI ARABIA	MAZUR SAND SEA-KUWAIT SM	27.5N	44.0E	25.7N	43.9E	0	LO	250	N	Y	19910407	070225	246	117	54	27
152	183	SAUDI ARABIA	PIVOT IRR.-WADI RUMMAH	26.0N	43.5E	25.6N	44.3E	0	NV	250	N	Y	19910407	070232	246	117	55	27
152	185	SAUDI ARABIA	KUWAIT OIL WELL FIRES	28.7N	47.3E	25.1N	46.7E	0	LO	250	N	Y	19910407	070308	246	119	57	27
152	186	SAUDI ARABIA	KUWAIT OIL WELL FIRES	28.5N	47.5E	25.0N	47.0E	0	LO	250	N	Y	19910407	070313	246	119	57	27
152	187	SAUDI ARABIA	KUWAIT OIL WELL FIRES	28.5N	48.0E	24.8N	48.0E	0	LO	250	N	Y	19910407	070329	246	120	58	27
152	189	SAUDI ARABIA	GULF OF BAHRAIN-BAHRAIN	25.5N	50.5E	23.9N	51.1E	45	LO	250	N	Y	19910407	070418	246	123	61	27
152	190	SAUDI ARABIA	GULF OF BAHRAIN-BAHRAIN	25.5N	50.5E	23.7N	51.8E	45	LO	250	N	Y	19910407	070429	246	124	62	27
152	191	SAUDI ARABIA	OIL FIRES-ZAWAR POINT	27.5N	49.0E	23.4N	53.0E	10	LO	250	N	N	19910407	070447	246	125	63	27
152	262	SAUDI ARABIA	RED SEA COAST-SUNGLINT	20.0N	40.0E	19.9N	39.3E	10	NV	250	N	Y	19910407	084100	246	139	72	28
152	263	SAUDI ARABIA	HIJAZ MASSIVE-SUNGLINT	19.5N	41.0E	19.5N	40.5E	15	NV	250	N	Y	19910407	084121	245	142	74	28

TABLE 4.4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		MADIR		CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM	EL	OR
				LAT	LONG	LAT	LONG												
152	264	SAUDI ARABIA	HJAZ MASSIVE	19.0N	42.5E	18.8N	42.2E	40	NV	250	N	Y	19910407	084149	245	146	75	28	
152	265	SAUDI ARABIA	RAHLAT YAM-NAJRAN	18.0N	45.5E	17.8N	44.6E	5	NV	250	N	N	19910407	084230	245	163	77	28	
74	44	SENEGAL	GAMBIA, GUINEA BISSAU			2.0N	17.9W	0	HO	250	N	N	19910409	134825	245	300	83	62	
77	69	SENEGAL	COAST AREA, CASAMANCE	12.6N	16.5W	12.4N	17.5W	0	LO	250	N	N	19910406	140439	244	245	75	16	
84	60	SENEGAL	DAKAR	14.5N	17.5W			0	NV	250	N	Y							
84	61	SENEGAL	DAKAR	14.5N	17.5W			0	NV	250	N	Y							
84	62	SENEGAL	DAKAR	14.5N	17.0W			0	NV	250	N	Y							
84	63	SENEGAL	SADOUN RIVER	14.0N	17.0W			0	LO	250	N	Y							
84	64	SENEGAL	SADOUN, GAMBIA RIVERS	13.5N	16.5W			0	LO	250	N	Y							
84	66	SENEGAL	GAMBIA, CASAMANCE RIVERS	12.5N	16.5W			5	LO	250	N	Y							
84	67	SENEGAL	CAHEU, CASAMANCE RIVERS	12.5N	16.0W			5	LO	250	N	Y							
84	70	SENEGAL	CASAMANCE RIVER	12.5N	15.5W			0	LO	250	N	Y							
84	71	SENEGAL	GAMBIA RIVER	13.0N	15.5W			0	LO	250	N	Y							
84	72	SENEGAL	GAMBIA, SALOUM RIVERS	14.0N	15.5W			0	LO	250	N	Y							
84	73	SENEGAL	GAMBIA RIVER	14.0N	15.0W			0	LO	250	N	Y							
84	74	SENEGAL	GAMBIA RIVER	14.0N	14.5W			0	NV	250	N	Y							
84	75	SENEGAL	GAMBIA RIVER	13.5N	14.5W			0	NV	250	N	Y							
84	76	SENEGAL	GAMBIA, KAYANGE RIVERS	13.0N	14.5W			0	NV	250	N	Y							
84	80	SENEGAL	GAMBIA RIVER	13.5N	13.5W			0	LO	250	N	N							
84	81	SENEGAL	GAMBIA RIVER	13.0N	13.5W			0	LO	250	N	Y							
84	82	SENEGAL	GAMBIA RIVER	13.0N	13.0W			0	NV	250	N	Y							
84	83	SENEGAL	GAMBIA RIVER	13.0N	12.5W			0	NV	250	N	Y							
86	76	SENEGAL	DAKAR AREA	14.8N	17.5W	14.6N	18.2W	0	LO	250	N	N	19910408	124637	246	136	79	46	
86	77	SENEGAL	SALOUM RIVER & DELTA AREA	14.3N	16.8W	14.4N	17.7W	0	LO	250	N	N	19910408	124646	246	137	80	46	
88	72	SENEGAL	GAMBIA R/BAY, SALOUM R/D.	13.8N	16.6W	14.4N	15.8W	0	LO	250	N	Y	19910409	120815	246	114	74	61	
88	73	SENEGAL	GAMBIA R/BAY, SALOUM R/D.	13.5N	16.6W	14.1N	15.2W	0	LO	250	U	Y	19910409	120826	246	115	75	61	
88	74	SENEGAL	DAKAR/PENINSULA, DARK	14.4N	17.1W	14.0N	15.0W	0	LO	250	N	N	19910409	120828	246	115	75	61	
88	75	SENEGAL	CASAMANCE R., COAST, DARK	12.7N	16.6W	13.8N	14.5W	5	LO	250	U	Y	19910409	120837	246	115	75	61	
88	81	SENEGAL	AGRICULTURE, DARK			13.3N	13.6W	0	LO	250	U	N	19910409	120854	246	115	76	61	
88	88	SENEGAL	GAMBIA R., AGR, DARK	13.2N	13.1W	12.3N	11.6W	0	LO	250	U	N	19910409	120931	246	115	79	61	
96	42	SENEGAL	DAKAR, GAMBIA R., GEBE R	13.0N	16.0W			0	LO	100	N	Y							
153	153	OCD SENEGAL	DAKAR, CANARY CURRENT	15.0N	18.0W			0	LO	250	N	N							
153	153	OCE SENEGAL	DAKAR, CANARY CURRENT	14.0N	18.0W			0	LO	250	N	Y							
153	153	OCF SENEGAL	DAKAR, SADOUN RIVER	14.0N	17.5W			0	LO	250	N	Y							
153	153	OCH SENEGAL	GAMBIA, CASAMANCE RIVERS	12.5N	15.5E			0	LO	250	N	Y							
77	79	SIERRA LEONE	HAZY, CLDY			9.5N	11.9W	60	LO	250	N	N	19910406	140623	243	262	70	16	
96	60	SIERRA LEONE	FOREST FIRES			9.3N	11.7W	60	LO	250	N	N	19910406	140627	243	262	70	16	
85	52	SOCOTRA	ENTIRE ISLAND	12.5N	54.0E	15.7N	53.1E	30	LO	250	N	N	19910409	072712	246	116	72	58	
90	21	SOCOTRA	ENTIRE ISLAND	12.3N	53.8E	10.9N	57.1E	15	LO	250	N	N	19910406	092515	244	256	71	13	
96	73	SOCOTRA	SOCOTRA ISLAND	11.5N	54.0E			5	LO	100	N	N							

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	CENTER LONG	MADIR LAT	MADIR LONG	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
97	40	SOCOTRA		12.5N	54.0E	15.0N	47.6E	20	HO	250	N	N	19910406	092224	244	219	78	13
98	9	SOCOTRA		12.6N	54.0E	13.9N	53.1E	20	LO	250	N	N	19910407	084500	246	208	81	28
98	10	SOCOTRA	SUNGLINT, WAVE PATTERNS			13.3N	54.3E	5	LO	250	N	N	19910407	084522	246	218	81	28
151	236	SOCOTRA	ENTIRE ISLAND-SUNGLINT	12.5N	53.5E	12.8N	53.4E	10	NV	250	N	N	19910406	092407	244	246	76	13
97	97	SOMALI	COAST			4.9N	44.0E	60	LO	250	N	N	19910406	110204	243	274	61	14
12	15	SOMALIA	HORN OF AFRICA, SOCOTRA	11.0N	50.0E	15.9N	54.7E	10	HO	35	O	N	19910410	084843	247	107	66	73
14	33	SOMALIA	GULF OF ADEN, SOCOTRA	11.0N	50.0E	10.3N	42.0E	15	HO	35	N	N	19910410	082534	247	101	78	74
14	34	SOMALIA	EAST COAST, ARABIAN SEA	8.0N	50.0E	9.7N	43.0E	30	HO	35	N	N	19910410	082554	247	99	79	74
14	35	SOMALIA	EAST COAST, ARABIAN SEA	8.0N	49.0E	9.4N	43.6E	30	HO	35	N	N	19910410	082605	247	98	80	74
14	36	SOMALIA	CARCAR MTNS.	10.0N	47.0E	8.5N	45.3E	30	LO	35	N	N	19910410	082636	247	94	82	74
14	37	SOMALIA	EAST COAST, ARABIAN SEA	8.0N	49.0E	7.7N	46.8E	35	LO	35	N	N	19910410	082704	247	88	83	74
56	15	SOMALIA	HORN OF AFRICA	10.0N	50.0E	8.7N	46.8E	15	LO	35	N	N	19910411	074842	248	90	74	89
77	1	SOMALIA	CENTRAL COAST			3.0N	47.4E	30	LO	250	N	N	19910406	110308	243	277	57	14
77	2	SOMALIA	CENTRAL COAST			2.9N	47.5E	LO	250	N	N	N	19910406	110311	243	277	57	14
77	3	SOMALIA	CENTRAL COAST			2.8N	47.6E	LO	250	N	N	N	19910406	110313	243	277	57	14
77	4	SOMALIA	CENTRAL COAST			2.7N	47.8E	LO	250	N	N	N	19910406	110317	243	277	56	14
77	5	SOMALIA	CENTRAL COAST			2.6N	48.0E	20	LO	250	N	N	19910406	110320	243	277	56	14
77	6	SOMALIA	CENTRAL COAST			2.3N	48.4E	20	LO	250	N	N	19910406	110328	243	277	56	14
84	10	SOMALIA	GULF OF TADJURA	11.5N	43.5E			20	LO	250	N	N						
84	11	SOMALIA	COAST, GULF OF ADEN	10.5N	44.0E			20	LO	250	N	N						
84	12	SOMALIA	COAST NEAR BERBERA	10.5N	45.0E			35	LO	250	N	N						
84	13	SOMALIA	COAST NEAR CHELIOT HILLS	7.5N	48.5E			35	HO	250	N	N						
84	14	SOMALIA	COAST NEAR CHELIOT HILLS	7.0N	47.0E			30	HO	250	N	N						
84	15	SOMALIA	COAST, INTERNAL WAVES	6.0N	47.0E			35	HO	250	N	N						
84	16	SOMALIA	COAST, INTERNAL WAVES	5.0N	47.0E			35	LO	250	N	N						
84	17	SOMALIA	COAST	4.5N	47.0E			40	LO	250	N	N						
84	18	SOMALIA	COAST, VERY DARK	4.0N	48.5E			15	LO	250	N	N						
88	36	SOMALIA	WEST COAST, GULF OF ADEN	10.0N	44.0E	9.0N	42.4E	50	LO	250	N	N	19910409	090436	246	128	87	59
88	37	SOMALIA	FAFEM WADI, ERER WADI	7.4N	43.8E	8.3N	43.6E	60	LO	250	N	N	19910409	090459	246	144	88	59
88	39	SOMALIA	INDIAN OCEAN COAST	8.6N	50.1E	6.6N	46.7E	60	LO	250	N	N	19910409	090557	246	286	87	59
88	40	SOMALIA	INDIAN OCEAN COAST	7.7N	49.6E	6.5N	46.9E	50	LO	250	N	N	19910409	090601	246	287	87	59
88	41	SOMALIA	INDIAN OCEAN COAST	6.9N	49.1E	6.4N	47.1E	45	LO	250	N	N	19910409	090604	246	288	86	59
88	42	SOMALIA	COAST/DUNES, SALT PANS	5.6N	48.5E	6.3N	47.2E	50	LO	250	N	N	19910409	090607	246	288	86	59
88	43	SOMALIA	COAST, DUNES, SALT PANS	4.9N	47.9E	6.2N	47.4E	50	LO	250	N	N	19910409	090611	246	289	86	59
88	44	SOMALIA	COAST, DUNES, SALT PANS	4.5N	47.6E	6.1N	47.6E	50	LO	250	N	N	19910409	090614	246	289	86	59
94	100	SOMALIA	GULF OF ADEN	11.0N	46.0E			15	HO	100	N	N						
94	101	SOMALIA	COAST, INDIAN OCEAN	5.0N	48.0E			30	HO	100	N	N						
94	102	SOMALIA	HORN OF AFRICA, SOCOTRA	10.5N	51.5E			20	HO	100	N	N						
96	100	SOMALIA	COAST, TADJOURA GULF	10.0N	44.0E			30	LO	100	N	N						
96	101	SOMALIA	COAST, CARCAR MTNS.	9.5N	45.5E			50	LO	100	N	N						

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	LONG	MADIR LAT	LONG	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
96	104	SOMALIA	COAST NEAR MABBER POINT	8.0N	48.5E			50	LO	100	N	N						
96	105	SOMALIA	COAST S. OF NEGRO BAY	7.0N	48.0E			40	LO	100	N	N						
96	106	SOMALIA	COAST S. OF NEGRO BAY	7.5N	48.5E			40	LO	100	N	Y						
96	107	SOMALIA	NEGRO BAY	8.0N	49.0E			40	LO	100	N	Y						
98	67	SOMALIA				7.2N	41.9E	60	LO	250	N	N	19910407	102220	244	269	73	29
152	6	SOMALIA	NEAR COAST-SAND DUNES	4.0N	46.5E	3.8N	45.8E	50	NV	250	N	Y	19910406	110239	243	275	59	14
152	7	SOMALIA	COAST-ITALA	3.0N	45.5E	3.7N	46.0E	50	NV	250	N	Y	19910406	110242	243	276	59	14
152	8	SOMALIA	COAST-MUGDISHO	2.5N	45.0E	3.7N	46.2E	55	LO	250	N	Y	19910406	110245	243	276	58	14
152	9	SOMALIA	COAST-DUNES-MUGDISHO	2.0N	44.0E	3.4N	46.6E	60	LO	250	N	Y	19910406	110253	243	276	58	14
152	10	SOMALIA	COAST-DUNES-ITALA	2.5N	47.0E	2.6N	47.9E	15	NV	250	N	Y	19910406	110318	243	277	56	14
152	11	SOMALIA	COAST-DUNES-CLOUDS	3.0N	47.5E	2.5N	48.1E	15	NV	250	N	Y	19910406	110323	243	277	56	14
152	12	SOMALIA	COAST-DUNES	3.5N	48.0E	2.3N	48.4E	15	LO	250	N	Y	19910406	110328	243	277	56	14
72	51	SOUTH AMERICA	STORM CELL, RIVER			0.2N	69.3W	80	LO	100	N	N	19910405	193013	243	278	47	4
152	67	SOUTH AMERICA	COLUMBIA,PANAMA,G. URABA			6.9N	78.9W	90	LO	250	N	N	19910406	184807	244	270	67	19
151	148	SOUTH CHINA SEA	BORNEO-MALAYSIA-BRUNEI	5.0N	114.0E	6.5N	112.7E	40	LO	250	N	N	19910406	062050	243	270	62	11
151	147	SOUTH CHINA SEA	BORNEO-BRUNEI BAY	5.5N	115.0E	5.9N	113.8E	35	LO	250	N	Y	19910406	062111	243	272	61	11
152	127	SOUTH CHINA SEA	VIETNAM COAST-HAI NAM TA			10.4N	107.7E	70	HO	250	N	N	19910407	054013	244	253	77	26
152	132	SOUTH CHINA SEA	INTERNAL WAVES			8.0N	112.0E	45	LO	250	N	N	19910407	054133	244	266	73	26
152	133	SOUTH CHINA SEA	DALLAS REEF-CURRENT BOUN	7.0N	113.0E	6.3N	115.1E	40	LO	250	N	N	19910407	054232	244	272	70	26
153	182	SOUTH CHINA SEA	SHIP WAKE			11.6N	111.0E	10	LO	250	N	N	19910410	034422	247	105	76	71
41	15	SRI LANKA	VIEW OF WHOLE ISLAND	7.0N	81.0E	3.2N	80.2E	25	LO	35	N	N	19910411	061814	248	48	83	88
41	16	SRI LANKA	VIEW OF WHOLE ISLAND	8.0N	81.0E	3.1N	80.5E	30	LO	35	N	N	19910411	061819	248	46	83	88
8	23	SUDAN	NUBIAN DESERT AREA,NILE	19.0N	28.0E	24.7N	30.5E	40	HO	35	N	N	19910410	084202	246	101	40	73
8	26	SUDAN	OVEREXPOSED,BEND IN NILE			23.8N	33.8E	0	HO	35	N	N	19910410	064254	246	102	43	73
8	33	SUDAN	PANORAMA			22.2N	38.8E	40	HO	35	N	N	19910410	064414	246	104	48	73
8	36	SUDAN	E.NUBIAN DESERT	19.0N	35.0E	21.1N	42.0E	40	LO	35	N	N	19910410	064506	246	105	52	73
14	17	SUDAN	NILE R., NUBIAN DESERT	19.0N	31.0E	18.0N	26.2E	5	HO	35	N	N	19910410	082052	247	106	60	74
14	18	SUDAN	NILE R., KHARTOUM	16.0N	32.0E	17.8N	26.7E	15	HO	35	N	N	19910410	082100	247	106	61	74
14	19	SUDAN	NILE R., NUBIAN DESERT	20.0N	32.0E	17.6N	27.2E	5	HO	35	N	N	19910410	082108	247	106	61	74
14	20	SUDAN	NILE R., NUBIAN DESERT	20.0N	30.0E	17.0N	28.3E	5	HO	35	N	N	19910410	082128	247	106	62	74
14	21	SUDAN	NILE R., KHARTOUM	17.0N	32.0E	16.7N	29.1E	10	LO	35	N	N	19910410	082142	247	106	63	74
14	22	SUDAN	NILE R., KHARTOUM	15.0N	30.0E	16.3N	30.1E	10	LO	35	N	N	19910410	082159	247	106	64	74
14	23	SUDAN	NILE R., KHARTOUM	17.0N	34.0E	15.9N	30.8E	5	LO	35	N	N	19910410	082212	247	106	65	74
14	24	SUDAN	NILE R., RED SEA	15.0N	36.0E	15.5N	31.7E	10	HO	35	N	N	19910410	082227	247	106	66	74
14	27	SUDAN	SUDAN AG., NILE RIVER	14.0N	35.0E	14.2N	34.5E	5	LO	35	N	N	19910410	082317	247	106	69	74
56	1	SUDAN	KHARTOUM, NILE RIVER	16.0N	33.0E	16.2N	32.0E	5	LO	35	N	N	19910411	074412	247	100	57	89
56	2	SUDAN	SUDAN AGRICULTURE REGION	14.0N	32.0E	16.1N	32.2E	0	LO	35	N	N	19910411	074416	247	100	58	89
56	3	SUDAN	SUDAN AGRICULTURE REGION	15.0N	33.0E	16.1N	32.3E	0	LO	35	N	N	19910411	074418	247	100	58	89
56	4	SUDAN	SUDAN AGRICULTURE REGION	14.0N	33.0E	15.9N	32.6E	5	LO	35	N	N	19910411	074424	247	100	58	89
56	5	SUDAN	NILE RIVER VALLEY	19.0N	33.0E	15.7N	33.0E	5	LO	35	N	N	19910411	074431	247	100	59	89

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	CENTER LON	MADIR LAT	MADIR LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL	OR
56	6	SUDAN	SUDAN AGRICULTURE REGION	14.0N	34.0E	14.6N	35.4E	0	LO	35	N	N	19910411	074514	247	100	61	89
73	96	SUDAN	NW SUDAN			23.7N	27.9E	40	LO	250	N	N	19910407	083754	246	123	61	28
73	101	SUDAN	E.COAST,RAS ABU SHAGARA	21.1N	37.2E	21.4N	35.3E	10	LO	250	N	N	19910407	083954	246	132	69	28
73	102	SUDAN	GULF OF AQIQ	18.1N	38.5E	20.2N	38.6E	10	LO	250	N	N	19910407	084048	246	137	72	28
82	61	SUDAN	NILE RIVER, DESERT	21.5N	31.1E	22.3N	30.7E	0	NV	250	N	Y	19910408	091738	245	145	71	13
82	62	SUDAN	NILE RIVER, DESERT	21.8N	31.3E	22.2N	30.9E	0	NV	250	N	Y	19910408	091741	245	146	71	13
82	80	SUDAN	NUBIAN DESERT,WADI OKO	21.3N	35.4E	20.9N	34.7E	15	NV	250	N	Y	19910408	091843	245	156	74	13
82	81	SUDAN	NUBIAN DESERT,WADI OKO	20.6N	35.5E	20.9N	34.9E	15	NV	250	N	Y	19910408	091846	245	156	74	13
82	82	SUDAN	NUBIAN DESERT,WADI OKO	20.2N	35.8E	20.8N	35.1E	15	NV	250	N	Y	19910408	091849	245	157	74	13
82	83	SUDAN	NUBIAN DES,KOLIBATAB WAD	19.7N	36.0E	20.8N	35.2E	0	LO	250	N	Y	19910408	091851	245	157	74	13
82	84	SUDAN	NUBIAN DES,HAYET WADI	20.0N	36.4E	20.7N	35.4E	10	NV	250	N	Y	19910408	091855	245	158	74	13
82	85	SUDAN	NUBIAN DES, YUDEB WADI	20.5N	36.3E	20.6N	35.6E	5	NV	250	N	Y	19910408	091858	245	159	74	13
82	86	SUDAN	NUBIAN DES, YUDEB WADI	21.0N	36.3E	20.5N	35.8E	10	LO	250	N	Y	19910408	091902	245	160	74	13
82	87	SUDAN	NUBIAN DES,DUNGUNAB BAY	21.0N	36.5E	20.4N	36.1E	15	NV	250	N	Y	19910408	091906	245	160	75	13
82	88	SUDAN	COAST RANGE,MT.ERBA	20.5N	37.0E	20.4N	36.3E	30	NV	250	N	Y	19910408	091909	245	161	75	13
85	90	SUDAN	SAND DESERT			17.6N	25.0E	0	LO	250	N	N	19910409	085923	246	114	67	59
85	91	SUDAN	SAND DESERT			17.4N	25.4E	0	LO	250	N	N	19910409	085930	246	114	68	59
85	92	SUDAN	SAND DESERT			17.0N	26.3E	0	LO	250	N	N	19910409	085945	246	114	68	59
85	93	SUDAN	SAND DESERT			16.8N	26.7E	0	LO	250	N	N	19910409	085952	246	114	69	59
85	94	SUDAN	DARK ROCK OUTCROP AREA			16.7N	27.1E	5	LO	250	N	N	19910409	085959	246	114	69	59
85	95	SUDAN	DARK ROCK OUTCROP AREA			16.5N	27.6E	0	LO	250	N	N	19910409	090007	246	115	70	59
85	96	SUDAN	CULTIVATED WADI			16.1N	28.3E	5	LO	250	N	N	19910409	090020	246	115	71	59
85	97	SUDAN	CULTIVATED WADI			16.0N	28.5E	10	LO	250	N	N	19910409	090024	246	115	71	59
85	98	SUDAN	HAZY,CLOY			15.6N	29.5E	60	LO	250	N	N	19910409	090041	246	115	72	59
85	99	SUDAN	SAND DESERT			14.8N	31.1E	50	LO	250	N	N	19910409	090110	246	116	74	59
85	100	SUDAN	WHITE NILE,IRR.AGRICULT.	14.0N	32.4E	14.6N	31.5E	20	LO	250	N	N	19910409	090117	246	116	74	59
85	101	SUDAN	WHITE NILE,IRR.AGRICULT.	14.3N	32.8E	14.3N	32.2E	10	LO	250	N	N	19910409	090129	246	117	75	59
85	102	SUDAN	WHITE NILE,IRR.AGRICULT.	14.5N	32.8E	14.0N	32.7E	10	LO	250	N	N	19910409	090138	246	117	76	59
85	103	SUDAN	WHITE NILE,IRR.AGRICULT.	13.8N	32.8E	13.9N	33.0E	0	LO	250	N	N	19910409	090143	246	117	76	59
85	104	SUDAN	BLUE NILE,IRR.AGRICULT.	13.0N	34.0E	13.7N	33.4E	0	LO	250	N	N	19910409	090150	246	117	76	59
85	105	SUDAN	BLUE NILE,IRR.AGRICULT.	13.0N	34.0E	13.6N	33.6E	0	LO	250	N	N	19910409	090154	246	117	77	59
85	106	SUDAN	BLUE NILE,IRR.AGRICULT.	13.0N	34.0E	13.5N	33.9E	0	LO	250	N	N	19910409	090159	246	117	77	59
88	9	SUDAN	SAND ST,DEPR,OU MOURDI	18.6N	24.2E	18.2N	23.5E	0	LO	250	N	N	19910409	085857	246	113	65	59
88	10	SUDAN	SAND STORM,ROCK OUTCROPS			18.1N	23.8E	0	LO	250	N	N	19910409	085901	246	113	66	59
88	11	SUDAN	SAND STORM,GRANITE INTR.	17.5N	27.0E	17.4N	25.3E	10	LO	250	N	N	19910409	085928	246	114	67	59
88	12	SUDAN	LIBYAN DESERT,SAND STORM			17.2N	25.9E	0	LO	250	N	N	19910409	085937	246	114	68	59
88	13	SUDAN	LIBYAN DES,ROCK RIDGE,SS	16.5N	27.5E	16.9N	26.5E	10	LO	250	N	Y	19910409	085948	246	114	69	59
88	14	SUDAN	SAND ST,EL HEITAN PLAT.	15.5N	28.0E	16.9N	26.6E	15	LO	250	N	Y	19910409	085950	246	114	69	59
88	15	SUDAN	JABAL MAYDUB,SAND STORM	15.4N	26.5E	16.5N	27.5E	15	LO	250	N	N	19910409	090006	246	115	70	59
88	16	SUDAN	SAND STORM FRONT, DESERT			16.1N	28.4E	20	LO	250	N	N	19910409	090021	246	115	71	59

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		MADIR		CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN	EL	OR
				LAT	LOW	LAT	LOW												
88	17	SUDAN	WADI MALIK, DESERT	16.5N	29.5E	16.0N	28.6E	30	LO	250	N	N	19910409	090026	246	115	71	59	
88	18	SUDAN	WADI MALIK	14.4N	28.2E	15.7N	29.3E	45	LO	250	U	N	19910409	090037	246	115	72	59	
88	19	SUDAN	WHITE NILE	14.7N	32.1E	14.7N	31.4E	40	NV	250	N	N	19910409	090114	246	116	74	59	
88	20	SUDAN	WHITE NILE	14.1N	32.3E	14.0N	31.5E	40	NV	250	N	N	19910409	090117	246	116	74	59	
88	21	SUDAN	WHITE NILE, CLOUDS	13.5N	32.6E	14.5N	31.7E	50	LO	250	N	N	19910409	090121	246	116	74	59	
88	22	SUDAN	BLUE NILE, DINDAR W, SGLT	13.6N	33.5E	13.9N	33.0E	0	LO	250	U	N	19910409	090144	246	117	76	59	
88	23	SUDAN	WHITE NILE, EL GEZIRA IRR	14.0N	33.0E	13.8N	33.2E	20	NV	250	N	Y	19910409	090148	246	117	76	59	
88	24	SUDAN	WHITE NILE, EL GEZIRA IRR	13.9N	32.4E	13.7N	33.5E	5	LO	250	U	N	19910409	090152	246	117	76	59	
88	25	SUDAN	WHITE NILE	13.1N	32.7E	13.6N	33.6E	0	LO	250	U	N	19910409	090155	246	117	77	59	
88	26	SUDAN	ATBARAH R, SATIT R, RESER.	14.6N	35.8E	13.0N	34.9E	0	LO	250	N	N	19910409	090218	246	118	78	59	
88	27	SUDAN	ATBARAH R, SATIT R.	14.0N	36.2E	12.9N	35.1E	0	LO	250	N	N	19910409	090221	246	118	78	59	
90	5	SUDAN	LAKE MASSER, MILE RIVER	21.5N	31.0E	22.0N	31.7E	10	NV	250	N	N	19910406	091753	245	147	71	13	
90	6	SUDAN	LAKE MASSER, MILE RIVER	21.8N	31.2E	21.8N	32.2E	0	LO	250	N	N	19910406	091802	245	149	72	13	
90	7	SUDAN	LAKE MASSER, MILE RIVER	21.9N	31.3E	21.4N	33.3E	0	LO	250	N	N	19910406	091820	245	152	73	13	
90	9	SUDAN	MUBIAN DES, DOME, MTS.	21.7N	35.0E	20.8N	35.1E	20	LO	250	N	N	19910406	091850	245	157	74	13	
90	10	SUDAN	DUNGUMAB BAY/PENINSULA	21.0N	37.3E	20.2N	36.8E	20	LO	250	N	N	19910406	091918	245	163	75	13	
94	78	SUDAN	MUBIAN DES., RED SEA	20.5N	35.5E			10	LO	100	N	Y							
94	79	SUDAN	MUBIAN DES., MILE RIVER	19.0N	34.0E			15	LO	100	N	Y							
94	80	SUDAN	MUBIAN DES., RED SEA	21.0N	35.5E			10	LO	100	N	Y							
94	96	SUDAN	MILE R., BAYUDA CRATER	18.0N	33.0E			15	LO	100	N	N							
95	76	SUDAN	WEST CENTRAL SUDAN			15.6N	23.8E	20	LO	250	N	N	19910406	105551	244	218	78	14	
95	77	SUDAN	WEST CENTRAL SUDAN			15.5N	23.9E	30	LO	250	N	N	19910406	105554	244	219	78	14	
95	78	SUDAN	SUDAN, CHAD BORDER			15.0N	24.9E	0	LO	250	N	N	19910406	105611	244	224	78	14	
95	79	SUDAN				14.6N	25.8E	80	LO	250	N	N	19910406	105628	244	229	77	14	
95	80	SUDAN	SW OF AL UBAYYID, WADI			14.2N	26.7E	5	LO	250	N	N	19910406	105643	244	233	77	14	
95	81	SUDAN	SW OF AL UBAYYID, WADI			13.6N	27.8E	5	NV	250	N	N	19910406	105703	244	238	76	14	
95	82	SUDAN	SW OF AL UBAYYID, WADI			13.6N	28.0E	10	NV	250	N	N	19910406	105706	244	239	76	14	
95	83	SUDAN				12.9N	29.3E	40	LO	250	N	N	19910406	105730	244	244	75	14	
95	84	SUDAN				12.6N	29.8E	10	LO	250	N	N	19910406	105739	244	246	75	14	
95	85	SUDAN	WHITE NILE, N. OF KUSTI	13.1N	32.3E	11.5N	32.0E	50	LO	250	N	N	19910406	105820	244	253	73	14	
95	86	SUDAN	WHITE NILE, CULTVD FIELDS	14.2N	32.6E	11.3N	32.3E	40	LO	250	N	N	19910406	105825	244	254	73	14	
95	87	SUDAN	WHITE NILE, SO. OF KUSTI			11.2N	32.6E	80	LO	250	N	N	19910406	105830	244	255	72	14	
95	88	SUDAN	WHITE NILE, SO. OF KUSTI	11.9N	32.8E	11.1N	32.8E	60	NV	250	N	N	19910406	105834	244	255	72	14	
95	89	SUDAN	WHITE NILE, SO. OF KUSTI	11.0N	32.7E	11.0N	33.0E	70	NV	250	N	N	19910406	105837	244	256	72	14	
95	90	SUDAN	WHITE NILE, SO. OF KUSTI	10.5N	32.3E	10.9N	33.2E	90	LO	250	N	N	19910406	105841	244	256	72	14	
96	86	SUDAN	DUST E. OF ENMEDI PLAT.	19.0N	24.5E			5	LO	100	N	Y							
96	87	SUDAN	TEIGA PLATEAU, DUST					10	LO	100	N	N							
96	88	SUDAN	REGION NEAR TIEGA PLAT.					5	LO	100	N	Y							
96	89	SUDAN	TEIGA PLAT., TEIJO HILL	15.0N	26.0E			15	LO	100	N	N							
96	90	SUDAN	DESERT, ESCARP. W MILE R	12.5N	30.5E			30	LO	100	N	N							



TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	CENTER LON	NADIR LAT	NADIR LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
96	91	SUDAN	MILE R. N OF KHARTOUM	16.0N	33.5E			55	LO	100	U	N						
96	92	SUDAN	SUDAN AG., NILE RIVER	14.0N	33.0E			15	LO	100	U	N						
96	93	SUDAN	SUDAN AG., BLUE NILE R.	13.5N	33.5E			10	LO	100	U	Y						
97	83	SUDAN				16.8N	21.0E	40	LO	250	N	N	19910406	105502	245	201	78	14
97	84	SUDAN	NW.DESERT, PANORAMA			16.1N	22.6E	0	HO	250	N	N	19910406	105530	244	210	78	14
97	85	SUDAN	NW.DESERT, PANORAMA			15.4N	24.2E	5	HO	250	N	N	19910406	105559	244	220	78	14
97	86	SUDAN				14.9N	25.2E	50	LO	250	N	N	19910406	105617	244	225	77	14
97	87	SUDAN	WHITE NILE			14.1N	26.9E	30	HO	250	N	N	19910406	105647	244	233	77	14
97	88	SUDAN	AGRICULTURAL FIELDS	14.0N	33.0E	13.3N	28.4E	50	LO	250	N	N	19910406	105714	244	240	76	14
97	89	SUDAN	AGRICULTURAL FIELDS	14.0N	33.0E	13.0N	29.1E	50	LO	250	N	N	19910406	105727	244	243	75	14
97	90	SUDAN	AGRICULTURAL FIELDS	14.0N	33.0E	12.7N	29.7E	50	LO	250	N	N	19910406	105737	244	245	75	14
98	57	SUDAN	SO. OF AL UBAYYID	12.4N	29.5E	14.4N	28.3E	10	LO	250	N	N	19910407	101809	245	196	82	29
98	58	SUDAN	SO. OF AL UBAYYID	12.5N	30.4E	14.2N	28.5E	10	LO	250	N	N	19910407	101814	245	199	82	29
151	258	SUDAN	CLOUDS-WADIS			14.5N	26.0E	75	LO	250	N	N	19910406	105631	244	229	77	14
151	259	SUDAN	WADI AL GHALLAH	12.0N	27.5E	13.8N	27.5E	15	LO	250	N	N	19910406	105657	244	236	76	14
151	260	SUDAN	WADI AYAK	13.0N	29.0E	12.8N	29.6E	15	NV	250	N	N	19910406	105735	244	245	75	14
152	259	SUDAN	NEAR COAST-DOUBLE EXPOS					20	LO	250	N	N						
152	260	SUDAN	NEAR COAST-DOUBLE EXPOS			21.2N	35.9E	20	LO	250	N	N	19910407	084004	246	133	69	28
152	261	SUDAN	COAST-TALLATALLA SAQIR I	19.0N	38.0E	20.3N	38.4E	10	LO	250	N	N	19910407	084045	246	137	72	28
153	185	SULU SEA	KAGAYAN IS., INT. WAVES	8.0N	118.0E	7.9N	118.0E	10	LO	250	N	N	19910410	034632	247	90	84	71
75	99	SURINAM	PARAMARIBO AREA	7.0N	55.0W	7.6N	56.3W	60	LO	250	N	N	19910406	171418	244	268	68	18
75	100	SURINAM	PARAMARIBO AREA	7.0N	55.0W	6.7N	54.7W	60	LO	250	N	N	19910406	171447	243	270	66	18
75	101	SURINAM	PARAMARIBO AREA	4.6N	55.0W	6.5N	54.3W	95	LO	250	N	N	19910406	171456	243	271	66	18
79	32	SURINAM	SURINAM R., PARAMARIBO	6.0N	55.0W	7.3N	55.7W	45	LO	250	N	N	19910406	171428	244	268	68	18
79	33	SURINAM	BLOWMESTEIN LAKE	6.0N	55.0W	6.6N	54.5W	60	LO	250	N	N	19910406	171451	243	270	66	18
90	111	SURINAM	COURANTYN R. AGR, GUYANA	6.0N	57.0W	7.7N	56.5W	45	LO	250	N	N	19910406	171414	244	267	68	18
90	112	SURINAM	COURANTYN R. AGR, GUYANA	6.0N	57.0W	6.9N	54.9W	55	LO	250	N	N	19910406	171443	243	270	67	18
90	113	SURINAM	BLOWMESTEIN RESERVOIR	5.0N	55.0W	6.4N	54.0W	75	LO	250	N	N	19910406	171500	243	271	66	18
90	114	SURINAM	BLOWMESTEIN RESERVOIR	5.0N	55.0W	5.8N	53.1W	75	LO	250	N	N	19910406	171518	243	272	65	18
90	115	SURINAM	BLOWMESTEIN RESERVOIR	5.0N	55.0W	5.3N	52.2W	80	LO	250	N	N	19910406	171535	243	273	64	18
15	13	SWAZILAND	ESCARPMENT	26.0S	32.0E	19.9S	27.0E	10	HO	35	N	N	19910410	132330	246	296	36	77
15	15	SWAZILAND	LAND USE, ESCARPMENT	27.0S	32.0E	20.3S	28.0E	5	LO	35	N	N	19910410	132347	246	296	35	77
15	16	SWAZILAND	LAND USE, ESCARPMENT	27.0S	31.0E	20.6S	28.9E	0	LO	35	N	N	19910410	132402	246	295	34	77
74	100	SWAZILAND	REP. S. AFRICA, MOZIAMB	26.5S	31.5E	24.6S	40.5E	5	LO	250	N	N	19910409	140545	244	286	16	62
9	37	TANZANIA	LAKE NATRON AREA	2.0S	35.0E	1.8N	34.8E	95	HO	35	N	N	19910411	092557	248	32	82	90
46	1	TANZANIA	ZANZIBAR I., PEMBA I., CST	7.0S	39.0E	2.5S	42.2E	60	HO	35	N	N	19910411	092819	248	340	79	90
75	5	TANZANIA	S. SHORE LAKE VICTORIA	2.2S	32.0E	1.5S	31.2E	70	LO	250	N	N	19910406	123901	243	281	49	15
75	6	TANZANIA	S. SHORE LAKE VICTORIA	1.5S	32.2E	1.6S	31.3E	80	LO	250	N	N	19910406	123904	243	281	48	15
75	7	TANZANIA	S. SHORE LAKE VICTORIA			1.7S	31.4E	80	LO	250	N	N	19910406	123906	243	281	48	15
75	8	TANZANIA	S. SHORE LAKE VICTORIA	1.5S	33.1E	1.8S	31.6E	80	LO	250	N	N	19910406	123909	243	281	48	15

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LAT	LONG LON	NADIR LAT LAT	LONG LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
75	9	TANZANIA	S. SHORE LAKE VICTORIA	1.6S	33.0E	1.9S	31.7E	70	LO	250	N	N	19910406	123912	243	281	48	15
75	10	TANZANIA	S. SHORE LAKE VICTORIA	2.0S	33.0E	2.0S	31.9E	70	LO	250	N	N	19910406	123915	243	281	48	15
75	11	TANZANIA	LK. NATRON	2.5S	35.4E	2.4S	32.6E	80	LO	250	N	N	19910406	123928	242	282	47	15
75	12	TANZANIA	LK. NATRON	2.4S	35.4E	2.5S	32.9E	80	LO	250	N	N	19910406	123934	242	282	47	15
75	13	TANZANIA	LK. NATRON	2.4S	36.0E	2.8S	33.4E	70	LO	250	N	N	19910406	123944	242	282	46	15
75	14	TANZANIA	C. RIFT, LK. MANYARA	3.2S	36.0E	3.3S	34.1E	70	LO	250	N	N	19910406	123958	242	282	45	15
75	15	TANZANIA	C. RIFT, LK. MANYARA	3.8S	35.8E	3.4S	34.3E	80	LO	250	N	N	19910406	124001	242	282	45	15
75	16	TANZANIA	C. RIFT, LKS MANYARA, NTRN	3.1S	36.0E	3.5S	34.4E	80	LO	250	N	N	19910406	124004	242	282	45	15
75	17	TANZANIA	C. RIFT, LKS MANYARA, NTRN	3.1S	36.0E	3.7S	34.9E	80	LO	250	N	N	19910406	124012	242	282	44	15
75	18	TANZANIA	C. RIFT, LK. NATRON	2.3S	36.0E	4.0S	35.4E	70	LO	250	N	N	19910406	124022	242	282	44	15
75	19	TANZANIA	C. RIFT, LK. NATRON	2.5S	36.5E	4.1S	35.5E	70	LO	250	N	N	19910406	124025	242	282	43	15
75	20	TANZANIA	C. RIFT AREA, E. OF NATRON	4.4S	36.0E	4.4S	36.0E	80	LO	250	N	N	19910406	124034	242	283	43	15
75	21	TANZANIA	C. RIFT AREA, E. OF NATRON	4.6S	36.4E	4.6S	36.4E	80	LO	250	N	N	19910406	124041	242	283	42	15
75	22	TANZANIA	C. RIFT AREA, LK. NATRON	4.7S	36.6E	4.7S	36.6E	70	LO	250	N	N	19910406	124045	242	283	42	15
75	23	TANZANIA	C. RIFT AREA, E. OF NATRON	4.8S	36.9E	4.8S	36.9E	70	LO	250	N	N	19910406	124050	242	283	42	15
75	24	TANZANIA	TANGA AREA, COAST	4.9S	37.0E	4.9S	37.0E	80	LO	250	N	N	19910406	124053	242	283	42	15
75	25	TANZANIA	TANGA AREA, COAST, KENYA	5.0S	37.2E	5.0S	37.2E	80	LO	250	N	N	19910406	124056	242	283	41	15
75	27	TANZANIA	LAKE NATRON	2.7S	36.5E	5.3S	37.7E	90	LO	250	N	N	19910406	124105	242	283	41	15
75	28	TANZANIA	ZANZIBAR ISLAND	6.3S	39.3E	6.2S	39.3E	50	LO	250	N	N	19910406	124136	242	283	39	15
75	29	TANZANIA	ZANZIBAR, PEMBA ISLANDS	5.8S	39.4E	6.3S	39.4E	50	LO	250	N	N	19910406	124139	242	283	39	15
75	30	TANZANIA	COAST, KENYA	6.6S	39.9E	6.6S	39.9E	50	LO	250	N	N	19910406	124147	242	283	38	15
75	31	TANZANIA	VERY CLOUDY	8.3S	42.9E	8.3S	42.9E	70	LO	250	N	N	19910406	124244	242	283	35	15
75	32	TANZANIA	MAFIA ISLAND, SUN GLINT	8.0S	39.8E	8.3S	43.1E	60	LO	250	N	N	19910406	124247	242	283	35	15
77	36	TANZANIA	S. LAKE VICTORIA	1.8S	33.4E	0.6S	29.6E	60	LO	250	N	N	19910406	123832	243	280	50	15
77	37	TANZANIA	S. LK. VICTORIA, SPEKE GULF	2.4S	33.0E	0.9S	30.0E	40	LO	250	N	N	19910406	123839	243	281	50	15
77	40	TANZANIA	LK. NATRON AREA	2.4S	36.1E	1.8S	31.7E	60	LO	250	N	N	19910406	123911	243	281	48	15
77	41	TANZANIA	LK. MANYARA	3.6S	35.8E	2.0S	31.9E	60	LO	250	N	N	19910406	123916	242	281	48	15
77	42	TANZANIA	AFRICAN RIFT AREA	2.2S	32.3E	2.2S	32.3E	60	LO	250	N	N	19910406	123923	242	281	47	15
77	43	TANZANIA	AFRICAN RIFT AREA	2.7S	33.1E	2.7S	33.1E	60	LO	250	N	N	19910406	123938	242	282	46	15
77	44	TANZANIA	KIKULETWA LK. AREA	3.6S	37.4E	2.9S	33.5E	60	LO	250	N	N	19910406	123945	242	282	46	15
77	45	TANZANIA	KIKULETWA LK. AREA	4.4S	37.5E	3.0S	33.7E	60	LO	250	N	N	19910406	123949	242	282	46	15
77	46	TANZANIA	UNMAPPED LAKE/RESVR.	5.1S	39.1E	3.2S	34.1E	70	LO	250	N	N	19910406	123957	242	282	45	15
77	47	TANZANIA	PEMBA ISLAND, TANGA AREA	5.2S	39.6E	3.5S	34.6E	60	LO	250	N	N	19910406	124006	242	282	45	15
77	48	TANZANIA	PEMBA ISLAND, TANGA AREA	5.2S	39.6E	4.1S	35.6E	50	LO	250	N	N	19910406	124026	242	282	43	15
77	49	TANZANIA	ZANZIBAR ISLAND	6.3S	39.5E	4.2S	35.8E	40	LO	250	N	N	19910406	124030	242	282	43	15
77	50	TANZANIA	PEMBA ISLAND	5.3S	39.8E	4.8S	36.9E	40	LO	250	N	N	19910406	124050	242	283	42	15
77	51	TANZANIA	ZANZIBAR ISLAND	6.4S	39.4E	5.0S	37.1E	40	LO	250	N	N	19910406	124054	242	283	42	15
77	52	TANZANIA	MAFIA ISLAND	7.8S	39.8E	5.2S	37.5E	50	LO	250	N	N	19910406	124102	242	283	41	15
86	62	TANZANIA	LAKE NATRON AREA	2.3S	36.0E	2.0S	35.8E	20	LO	250	N	N	19910408	112235	245	289	62	45
86	63	TANZANIA	LAKE MANYARA AREA	3.8S	36.0E	3.2S	37.8E	60	LO	250	N	N	19910408	112312	245	290	60	45

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	LOW	MADIR LAT	LOW	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
86	64	TANZANIA	KILIMANJARO CLOUDY	3.3S	37.0E	3.9S	39.0E	70	LO	250	N	19910408	112336	245	290	58	45	
86	65	TANZANIA	KILIMANJARO CLOUDY	3.3S	37.0E	4.1S	39.4E	70	LO	250	N	19910408	112344	245	290	58	45	
89	13	TANZANIA	LAKE NATRON	2.4S	36.9E	1.8S	35.4E	20	LO	250	N	19910408	112226	245	289	63	45	
89	14	TANZANIA	LAKE NATRON	2.1S	38.0E	1.9S	35.7E	15	LO	250	N	19910408	112232	245	289	63	45	
89	17	TANZANIA	L. NATRON, L. MAGADI	2.4S	36.2E	2.5S	36.7E	30	NV	250	N	19910408	112251	245	289	61	45	
89	18	TANZANIA	L. MANYARA, L. BURUNGI	3.6S	35.9E	2.6S	36.8E	50	LO	250	N	19910408	112254	245	289	61	45	
89	19	TANZANIA	L. MANYARA, L. BURUNGI	3.4S	35.9E	2.7S	37.0E	50	LO	250	N	19910408	112257	245	289	61	45	
89	20	TANZANIA	MOSHI, AFLD, KIKULEIWA RES	3.5S	37.2E	2.8S	37.1E	60	LO	250	N	19910408	112300	245	289	61	45	
89	21	TANZANIA	MOSHI, KIKULEIWA RES.	3.5S	37.5E	2.9S	37.3E	75	NV	250	N	19910408	112303	245	290	61	45	
89	23	TANZANIA	L. NATRON, SUNGLINT	2.5S	36.0E	3.3S	38.0E	20	LO	250	N	19910408	112317	245	290	60	45	
89	24	TANZANIA	L. NATRON, SUNGLINT	2.5S	36.0E	3.4S	38.2E	25	LO	250	N	19910408	112320	245	290	59	45	
89	25	TANZANIA	LAKE NATRON	2.3S	36.0E	3.6S	38.5E	30	LO	250	U	19910408	112326	245	290	59	45	
89	26	TANZANIA	KIKULEIWA RESERVOIR	3.6S	37.4E	3.9S	39.0E	85	LO	250	U	19910408	112335	245	290	59	45	
89	27	TANZANIA	LAKE AMBUSSEL	4.0S	37.3E	3.9S	39.1E	85	LO	250	N	19910408	112337	245	290	58	45	
89	28	TANZANIA	PLAINS, MOUNTAINS			4.0S	39.2E	85	LO	250	N	19910408	112340	245	290	58	45	
89	29	TANZANIA	ZANZIBAR, ZANZIBAR ISLAND	6.2S	39.0E	4.2S	39.5E	15	LO	250	U	19910408	112345	245	290	58	45	
89	30	TANZANIA	ZANZIBAR I., PEMBA I., CST.	5.5S	39.3E	4.3S	39.7E	20	LO	250	U	19910408	112348	245	290	58	45	
89	31	TANZANIA	PEMBA I./CHANNEL, COAST	4.9S	39.4E	4.3S	39.8E	20	NV	250	U	19910408	112350	245	290	58	45	
90	45	TANZANIA	VERY DARK			1.4S	30.9E	40	LO	250	U	19910406	123858	243	281	49	15	
90	46	TANZANIA	L. VICTORIA-SOUTH COAST	2.5S	32.5E	1.5S	31.2E	50	LO	250	U	19910406	123901	243	281	49	15	
90	47	TANZANIA	L. VICTORIA-SPEKE GULF	2.5S	33.5E	1.7S	31.4E	50	LO	250	U	19910406	123906	243	281	48	15	
90	48	TANZANIA	L. VICTORIA-EAST COAST	1.5S	33.5E	1.8S	31.6E	50	LO	250	U	19910406	123909	243	281	48	15	
90	49	TANZANIA	L. VICTORIA-WEST COAST	1.7S	31.8E	2.0S	31.9E	50	NV	250	U	19910406	123916	242	281	48	15	
90	50	TANZANIA	L. VICTORIA-WEST COAST	2.1S	31.8E	2.1S	32.1E	70	NV	250	U	19910406	123919	242	281	47	15	
90	51	TANZANIA	L. VICTORIA-SOUTH COAST	2.5S	32.5E	2.2S	32.4E	65	NV	250	U	19910406	123924	242	281	47	15	
90	52	TANZANIA	L. VICTORIA-MWANZA/GULF	2.5S	33.0E	2.4S	32.6E	60	NV	250	U	19910406	123928	242	282	47	15	
90	53	TANZANIA	L. VICTORIA-SPEKE GULF	2.5S	33.5E	3.3S	34.2E	60	LO	250	U	19910406	123959	242	282	45	15	
90	54	TANZANIA	LAKE EYASI	3.6S	34.7E	3.5S	34.6E	60	NV	250	U	19910406	124006	242	282	45	15	
90	55	TANZANIA	LAKE NATRON	2.5S	36.0E	4.4S	36.1E	50	LO	250	U	19910406	124036	242	283	43	15	
90	56	TANZANIA	TANGA, COAST, PEMBA CHAN.	5.0S	39.0E	5.5S	38.0E	35	LO	250	U	19910406	124112	242	283	41	15	
90	57	TANZANIA	TANGA, COAST, PEMBA CHAN.	5.1S	39.3E	6.3S	39.4E	30	LO	250	U	19910406	124139	242	283	39	15	
90	58	TANZANIA	ZANZIBAR/ISLAND/CHANNEL	6.0S	39.5E	6.4S	39.7E	15	NV	250	U	19910406	124143	242	283	39	15	
90	59	TANZANIA	DAR ES SALAM, COAST	7.0S	39.5E	6.7S	40.2E	30	LO	250	U	19910406	124153	242	283	38	15	
152	23	TANZANIA	LAKE VICTORIA	2.5S	32.5E	2.7S	33.1E	40	NV	250	N	19910406	123939	242	282	46	15	
152	24	TANZANIA	L. NATRON-L. MANYARA	3.0S	36.0E	3.1S	33.8E	50	LO	250	N	19910406	123951	242	282	46	15	
152	25	TANZANIA	L. MANYARA	4.0S	35.5E	3.2S	34.0E	50	LO	250	N	19910406	123956	242	282	45	15	
152	26	TANZANIA	NEAR L. MANYARA	4.5S	36.0E	3.4S	34.3E	50	LO	250	N	19910406	124001	242	282	45	15	
152	27	TANZANIA	MT. KITUMBEINE	3.0S	36.5E	3.7S	34.9E	50	LO	250	N	19910406	124012	242	282	44	15	
152	28	TANZANIA	MT. KITUMBEINE, KILIMANJA	3.0S	36.5E	3.8S	35.1E	40	LO	250	N	19910406	124017	242	282	44	15	
152	29	TANZANIA	SOUTH PARE MNTS.	4.5S	37.5E	4.0S	35.4E	45	LO	250	N	19910406	124023	242	282	44	15	

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	LOW	MADIR LAT	LOW	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL	OR
152	30	TANZANIA	MNTS., WOODED AREA	5.0S	36.0E	4.5S	36.2E	65	NV	250	N	Y	19910406	124038	242	283	43	15
152	31	TANZANIA	MNTS., NEAR COAST	6.0S	38.0E	4.8S	36.7E	40	LO	250	N	Y	19910406	124047	242	283	42	15
152	33	TANZANIA	USAMBARA MOUNTAINS	4.5S	38.5E	5.0S	37.1E	45	NV	250	N	Y	19910406	124054	242	283	42	15
152	34	TANZANIA	PENBA, ZANZIBAR ISLANDS	5.5S	39.5E	5.1S	37.3E	15	LO	250	N	Y	19910406	124058	242	283	41	15
152	35	TANZANIA	DAR ES SALAM, ZANZIBAR I	6.5S	39.0E	5.2S	37.5E	25	LO	250	N	Y	19910406	124102	242	283	41	15
152	36	TANZANIA	L. KITANGIRI, MEMBERE SWAM	4.5S	34.0E	5.6S	38.0E	70	LO	250	N	Y	19910406	124112	242	283	41	15
152	37	TANZANIA	RUFJI RIVER, COAST	8.0S	38.5E	6.3S	39.4E	70	LO	250	N	Y	19910406	124139	242	283	39	15
152	38	TANZANIA	KISWERE HAVEN, COAST	9.5S	39.5E	6.5S	39.8E	60	LO	250	N	Y	19910406	124146	242	283	38	15
153	OAX	TANZANIA	SERENGETI PL., L. NATRON	2.5S	36.0E			15	LO	250	N	Y						
153	OAY	TANZANIA	SERENGETI PL., L. NATRON	2.5S	34.5E			25	LO	250	N	Y						
153	OAZ	TANZANIA	SERENGETI, L. VICTORIA	2.0S	34.0E			60	LO	250	N	Y						
153	OBA	TANZANIA	SE HALF OF L. VICTORIA	2.0S	33.0E			70	LO	250	N	Y						
153	OBB	TANZANIA	E. HALF OF L. VICTORIA	1.0S	33.0E			75	LO	250	N	Y						
153	OBC	TANZANIA	L. NATRON, ELA MAIBORI C	2.5S	35.5E			20	NV	250	N	Y						
153	OBD	TANZANIA	L. NATRON, SERENGETI PL.	2.5S	35.5E			25	NV	250	N	Y						
153	OBE	TANZANIA	SERENGETI PL., L. EYASI	3.0S	36.0E			45	LO	250	N	Y						
153	OBF	TANZANIA	L. NATRON, KITUMBEINE V.	2.5S	36.5E			20	NV	250	N	Y						
153	OBG	TANZANIA	L. NATRON, EYASI	3.5S	36.0E			40	NV	250	N	Y						
153	OBH	TANZANIA	L. EYASI, MANYARA	4.0N	38.0E			55	LO	250	N	Y						
153	OBJ	TANZANIA	L. EYASI, KITANGIRI	4.0S	35.0E			60	LO	250	N	Y						
153	OBK	TANZANIA	L. KITANGIRI, RIFT VAL.	4.0S	34.1E			70	LO	250	N	Y						
153	OBL	TANZANIA	L. BALANGIDA, HAMANG MT.	5.0S	35.0E			75	LO	250	N	Y						
153	OBM	TANZANIA	AREA SW OF KILIMANJARO	4.5S	36.5E			70	LO	250	N	Y						
153	OBN	TANZANIA	S. OF KILIMANJARO	4.0S	37.0E			50	LO	250	N	Y						
153	OBP	TANZANIA	MT. MERU, L. KIKULEIWA	3.5S	37.0E			45	LO	250	N	Y						
153	OBS	TANZANIA	L. KIKULEIWA, JIPE	4.0S	38.0E			50	LO	250	N	Y						
153	OBT	TANZANIA	SOUTH PARE MTS.	4.6S	38.0E			60	LO	250	N	Y						
153	OBV	TANZANIA	PENBA IS., PENBA CHAM.	4.5S	38.5E			35	LO	250	N	Y						
153	OBW	TANZANIA	PENBA IS., USAMBARA MTS	5.0S	38.5E			35	LO	250	N	Y						
153	OBX	TANZANIA	ZANZIBAR CH., USAMBARA M	5.5S	38.5E			35	LO	250	N	Y						
153	OBY	TANZANIA	ZANZIBAR CH., USAMBARA M	6.0S	38.0E			55	LO	250	N	Y						
153	OBZ	TANZANIA	PENBA, ZANZIBAR ISLANDS	5.5S	39.5E			30	LO	250	N	Y						
153	OCA	TANZANIA	ZANZIBAR ISLAND	6.0S	39.0E			45	LO	250	N	Y						
153	OCB	TANZANIA	NEAR DAR ES SALAAM	7.0S	38.5E			70	LO	250	N	Y						
153	OCC	TANZANIA	MAFIA IS., RUFJI R. DEL.	8.0S	39.5E			75	LO	250	N	Y						
151	139	THAILAND	RESERVOIR-COAST	15.0N	98.5E	13.6N	99.4E	55	LO	250	N	Y	19910406	061644	244	241	75	11
151	140	THAILAND	RESERVOIR-COAST	14.0N	99.0E	13.3N	100.1E	50	LO	250	N	Y	19910406	061657	244	243	74	11
151	141	THAILAND	BANGKOK, BIGHT OF BANGKOK	13.5N	100.5E	12.8N	101.1E	50	LO	250	N	Y	19910406	061714	244	247	74	11
152	117	THAILAND	BANGKOK-HAZE	14.5N	100.0E	15.0N	98.5E	40	LO	250	N	Y	19910407	053726	245	194	81	26
80	36	TOGO	KETA LAGOON, LOWE	6.0N	1.0E	6.4N	0.7W	40	NV	250	N	Y	19910409	121254	246	297	87	61

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	NADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR		
80	37	TOGO	LAKE TOGO, LOME	6.5N 1.5E	6.3N 0.4W	55	LO	250	N	Y	19910409	121259	246	297	87	61		
79	26	TRINIDAD AND TOBAGO	TOBAGO ISLAND	11.5N 60.5W	11.3N 63.1W	20	LO	250	N	N	19910408	171211	244	251	75	18		
9	35	UGANDA	N. EDGE OF LAKE VICTORIA	0.1N 33.0E	3.2N 32.6E	95	LO	35	N	N	19910411	092514	248	51	82	90		
9	36	UGANDA	N. EDGE OF LAKE VICTORIA	0.4S 33.0E	2.8N 33.1E	90	LO	35	N	N	19910411	092525	248	47	82	90		
13	7	UGANDA	LAKE VICTORIA REGION	0.0N 32.0E	3.5N 30.2E	70	LO	35	N	N	19910410	100252	248	353	86	75		
13	9	UGANDA	LAKES VICTORIA, KYOGA	1.0N 34.0E	1.9N 32.9E	60	LO	35	N	N	19910410	100344	248	330	83	75		
77	34	UGANDA	LAKE VICTORIA	1.0S 33.0E	0.3S 29.0E	60	LO	250	N	N	19910406	123820	243	280	51	15		
86	59	UGANDA	SW HALF LAKE ALBERT	1.4N 30.6E	0.9N 30.9E	40	LO	250	N	N	19910408	112100	245	287	88	45		
86	60	UGANDA	CENTRAL LAKE ALBERT	1.8N 30.8E	0.8N 31.0E	60	LO	250	N	N	19910408	112102	245	287	88	45		
86	61	UGANDA	NE SECTION LAKE ALBERT	2.1N 31.3E	0.7N 31.1E	80	LO	250	N	N	19910408	112104	245	287	88	45		
89	7	UGANDA	L. VICTORIA, SESE ISLANDS	0.0	32.3E	1.1S	34.2E	40	LO	250	N	Y	19910408	112203	245	288	84	45
89	8	UGANDA	L. VICTORIA, SESE ISLANDS	0.6S	32.0E	1.1S	34.3E	40	LO	250	N	Y	19910408	112205	245	289	84	45
89	9	UGANDA	L. VICTORIA, SESE ISLANDS	0.9S	32.4E	1.2S	34.4E	40	LO	250	N	Y	19910408	112207	245	289	84	45
153	0A3	UGANDA	LAKE ALBERT, RIFT VALLEY	3.0N	31.0E	50	LO	250	N	Y								
153	0A4	UGANDA	LAKES ALBERT, KYOGA	1.0N	31.5E	55	LO	250	N	Y								
153	0A5	UGANDA	LAKE ALBERT, RIFT VALLEY	1.0N	30.5E	60	LO	250	N	Y								
153	0A6	UGANDA	LAKE KYOGA	1.5N	32.5E	55	LO	250	N	N								
153	0A7	UGANDA	LAKES KYOGA, VICTORIA	1.0N	33.0E	60	LO	250	N	Y								
153	0A8	UGANDA	N. SHORE OF L. VICTORIA	0.0	33.0E	50	LO	250	N	Y								
153	0A9	UGANDA	AREA NW OF LAKE VICTORIA	0.0	31.0E	65	LO	250	N	Y								
153	0A10	UGANDA	AREA WNW OF L. VICTORIA	0.6S	31.0E	65	LO	250	N	Y								
153	0A11	UGANDA	N. HALF OF L. VICTORIA	1.0S	33.0E	50	LO	250	N	Y								
153	0A12	UGANDA	NE HALF OF L. VICTORIA	0.5S	33.5E	35	LO	250	N	Y								
73	50	UNITED ARAB EMIRATES	COAST	24.3N	52.7E	23.3N	53.4E	40	LO	250	N	N	19910407	070454	246	126	63	27
73	51	UNITED ARAB EMIRATES	ASH SHARIQAH AREA			22.6N	55.5E	80	LO	250	N	N	19910407	070527	246	128	65	27
92	49	UNITED ARAB EMIRATES	COAST, OFFSHORE IS.	24.3N	52.2E	23.7N	51.9E	40	LO	250	N	N	19910407	070430	246	124	62	27
96	71	UNITED ARAB EMIRATES	SAND DUNES, PERSIAN GULF	24.0N	51.0E	65	HO	100	N	N								
96	72	UNITED ARAB EMIRATES	SAND DUNES, PERSIAN GULF	23.5N	52.0E	55	HO	100	N	N								
152	192	UNITED ARAB EMIRATES	MUSANDAM PENINSULA	25.0N	56.5E	22.0N	57.5E	70	LO	250	N	N	19910407	070601	246	131	67	27
76	1	USA				25.7N	96.2W	50	HO	250	N	N	19910409	150615	245	102	39	63
99	75	USA	GRO DEPLOY- SW USA			27.5N	116.9W	20	HO	40	N	N	19910407	143924	246	89	14	32
99	76	USA	GRO DEPLOY- SW USA			27.6N	115.9W	20	HO	40	N	N	19910407	143938	246	90	14	32
99	77	USA	GRO DEPLOY- SW USA			27.7N	115.1W	20	HO	40	N	N	19910407	143951	246	90	15	32
99	78	USA	GRO DEPLOY- SO. CA COAST			28.0N	112.8W	40	HO	40	N	N	19910407	144024	246	91	17	32
99	79	USA	GRO DEPLOY- SO. CA/NEX			28.1N	111.3W	40	HO	40	N	N	19910407	144046	246	92	19	32
99	88	USA	GRO DEPLOY, SW USA/NW MX			28.3N	118.3W	10	HO	40	N	N	19910407	161818	246	101	34	33
99	89	USA	GRO DEPLOY, SW USA/NW MX			28.3N	117.9W	10	HO	40	N	N	19910407	161824	246	102	34	33
79	16	USA-AL	MOBILE AREA	30.5N	88.0W	27.4N	87.2W	55	LO	250	N	N	19910406	152536	246	114	49	17
78	8	USA-AZ	SW ARIZONA DESERT	33.0N	112.5W	28.1N	111.4W	0	LO	250	N	N	19910409	150212	244	94	24	63
78	9	USA-AZ	SOMORAN DESERT	33.5N	114.0W	28.1N	111.2W	0	LO	250	N	N	19910409	150216	244	94	24	63

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	NADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
78	10	USA-AZ	L. MEAD, GRAND CANYON	35.5N 114.0W	28.1N 110.8W	0	HO	250	N	N	19910409	150221	244	94	24	63
78	11	USA-AZ	L. MEAD, GRAND CANYON	35.5N 113.0W	28.0N 110.6W	0	HO	100	N	N	19910409	150224	244	94	25	63
78	12	USA-AZ	PHOENIX, GRAND CANYON	35.0N 112.5W	28.0N 110.3W	0	LO	250	N	N	19910409	150229	244	95	25	63
78	13	USA-AZ	GRAND CANYON	36.0N 113.0W	28.0N 110.0W	0	HO	250	N	N	19910409	150233	244	95	25	63
78	14	USA-AZ	PHOENIX REGION	33.5N 112.0W	27.9N 109.3W	0	LO	250	N	N	19910409	150244	244	95	26	63
78	15	USA-AZ	SAN FRANCISCO VOL. AREA	35.0N 112.0W	27.9N 109.1W	0	LO	250	N	N	19910409	150247	244	95	26	63
78	16	USA-AZ	COLORADO PLATEAU	35.5N 110.5W	27.9N 108.9W	15	HO	250	N	N	19910409	150250	244	95	26	63
78	17	USA-AZ	PAINTED DESERT	35.5N 111.0W	27.8N 108.7W	10	HO	250	N	N	19910409	150253	244	95	26	63
78	18	USA-AZ	CHUSKA MTS. PAINTED DES	34.5N 110.0W	27.8N 108.5W	0	LO	250	N	N	19910409	150256	244	95	27	63
78	19	USA-AZ	MOGOLLON RIM	33.0N 109.0W	27.8N 108.1W	0	LO	250	N	N	19910409	150301	244	96	27	63
79	7	USA-AZ	PHOENIX AREA	33.5N 112.0W	28.2N 112.2W	0	LO	250	N	N	19910406	151930	246	97	26	17
79	8	USA-AZ	GRAND CANYON, FLAGSTAFF	35.5N 112.0W	28.2N 111.5W	40	HO	250	N	N	19910406	151940	246	97	27	17
98	76	USA-AZ	COLORADO RIVER	28.1N 111.0W	28.1N 111.0W	0	LO	250	N	N	19910407	144051	246	92	19	32
98	77	USA-AZ	YUMA, COLORADO RIVER	32.6N 114.7W	28.2N 109.3W	0	LO	250	N	N	19910407	144115	246	93	21	32
98	78	USA-AZ	YUMA, COLORADO RIVER	32.7N 114.7W	28.3N 108.7W	0	LO	250	N	N	19910407	144125	246	94	21	32
98	79	USA-AZ		28.4N 105.4W	28.4N 105.4W	0	LO	250	N	N	19910407	144212	246	95	24	32
98	83	USA-AZ	EAST OF TUCSON	32.2N 109.9W	27.2N 107.3W	0	LO	250	N	N	19910407	162100	246	108	44	33
153	16	USA-AZ	YUMA, PHOENIX, PINACATE	33.0N 113.0W	28.3N 114.5W	0	LO	250	N	N	19910409	150128	244	93	21	63
153	20	USA-AZ	FOUR CORNERS, GRAND CAN.	36.0N 110.0W		15	HO	250	N	N						
16	1	USA-CA	IMPERIAL VAL., SAN DIEGO	34.0N 116.0W	26.0N 118.4W	10	HO	35	N	N	19910410	160125	245	97	32	79
16	2	USA-CA	VIEW N. OF CALIF. COAST	35.0N 121.0W	25.8N 117.2W	15	HO	35	N	N	19910410	160143	245	97	33	79
72	30	USA-CA	SALTON SEA-CA COAST	33.5N 116.5W	24.9N 123.5W	20	HO	100	N	Y	19910405	191417	245	138	65	4
72	31	USA-CA	CA COAST-SAN CLEMENTE I.	34.0N 117.0W	24.7N 122.8W	20	HO	100	N	Y	19910405	191427	245	139	66	4
72	32	USA-CA	SALTON SEA-CA COAST	33.5N 116.0W	24.2N 121.0W	10	HO	100	N	N	19910405	191456	245	142	67	4
74	101	USA-CA	MOJAVE DESERT AREA	36.2N 117.8W	28.4N 117.1W	0	LO	250	N	N	19910409	150049	244	89	15	63
74	102	USA-CA	S. END SAN JACQUIN VALLEY	35.2N 119.0W	28.4N 116.8W	0	LO	250	N	N	19910409	150054	244	89	15	63
74	103	USA-CA	SIERRA NEVADA MTS	36.0N 118.2W	28.4N 115.7W	10	LO	250	N	N	19910409	150110	244	90	16	63
74	104	USA-CA	SIERRA NEVADA MTS	28.4N 115.5W	28.4N 115.5W	20	HO	250	N	N	19910409	150113	244	90	17	63
74	105	USA-CA	AREA NW. LOS ANGELES	35.2N 120.0W	28.4N 115.3W	0	LO	250	N	N	19910409	150116	244	90	17	63
74	106	USA-CA	MOJAVE, L.A. AREA	34.5N 118.0W	28.3N 115.1W	0	LO	250	N	N	19910409	150119	244	90	17	63
74	107	USA-CA	LOS ANGELES BASIN	34.2N 116.8W	28.3N 114.9W	0	LO	250	N	N	19910409	150122	244	90	17	63
75	70	USA-CA	SALTON SEA AREA	27.8N 116.5W	27.8N 116.5W	60	HO	250	N	N	19910406	151826	246	94	22	17
75	71	USA-CA	SALTON SEA AREA	27.9N 115.7W	27.9N 115.7W	40	HO	250	N	N	19910406	151838	246	95	23	17
78	1	USA-CA	SALTON SEA, IMP. VALLEY	32.5N 115.5W	28.2N 113.2W	0	LO	250	N	N	19910409	150146	244	93	22	63
78	2	USA-CA	SALTON SEA, MOJAVE DES.	33.5N 116.0W	28.2N 113.0W	0	LO	250	N	N	19910409	150149	244	93	22	63
78	3	USA-CA	MOJAVE DES., DEATH VAL.	35.0N 116.5W	28.2N 112.7W	0	LO	250	N	N	19910409	150153	244	93	23	63
78	5	USA-CA	SO. CAL. COAST/MTNS.	33.0N 116.0W	28.2N 112.1W	0	LO	250	N	N	19910409	150202	244	94	23	63
79	3	USA-CA	SIERRA NEVADA MTS.	37.5N 118.0W	27.6N 118.4W	65	HO	250	N	N	19910406	151758	246	93	20	17
79	4	USA-CA	SALTON SEA, IMPERIAL VAL	32.5N 115.5W	28.0N 114.2W	0	LO	250	N	N	19910406	151901	246	96	24	17
79	5	USA-CA	MOJAVE DESERT	35.0N 117.0W	28.1N 113.8W	70	LO	250	N	N	19910406	151907	246	96	25	17

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	EL	OR
79	6	USA-CA	SALTON SEA, IMP. VALLEY	32.5N 115.5W	28.1N 112.7W	0	LO	250	N	N	19910406	151922	246	96	26	17
83	47	USA-CA	SOUTH 1/3 STATE, CST	34.8N 117.5W	28.5N 120.1W	15	HO	100	N	N	19910409	150008	243	90	16	63
83	48	USA-CA	SOUTH 1/3 STATE, CST	34.5N 116.5W	28.5N 119.4W	15	HO	100	N	Y	19910409	150018	243	90	16	63
83	49	USA-CA	SOUTH 1/3 STATE, CST	35.5N 117.5W	28.5N 119.1W	15	HO	100	N	Y	19910409	150021	243	90	17	63
83	50	USA-CA	MID STATE PANORAMA	36.5N 118.5W	28.5N 118.3W	15	HO	100	N	Y	19910409	150032	243	91	17	63
83	51	USA-CA	MID STATE PANORAMA	36.5N 119.5W	28.5N 117.5W	15	HO	100	N	Y	19910409	150043	244	91	18	63
83	52	USA-CA	SOUTH 1/3 PANORAMA	35.0N 117.5W	28.4N 117.1W	15	HO	100	N	Y	19910409	150049	244	91	19	63
83	53	USA-CA	STATE AXIS NO. PANORAMA	34.5N 117.5W	28.2N 112.1W	10	HO	100	N	Y	19910409	150203	244	94	23	63
83	54	USA-CA	STATE AXIS NO. PANORAMA	35.0N 117.5W	28.1N 111.4W	10	HO	100	N	Y	19910409	150212	244	94	24	63
87	121	USA-CA	CHANNEL IS., PT. CONCEPCION	35.0N 120.0W	28.3N 114.9W	15	HO	250	N	N	19910409	150122	244	92	21	63
87	122	USA-CA	LOS ANGELES, MOJAVE DES.	33.5N 117.5W	28.3N 114.7W	0	LO	250	N	N	19910409	150125	244	92	21	63
87	123	USA-CA	SAN DIEGO, COAST	33.0N 116.5W	28.3N 114.5W	0	LO	250	N	N	19910409	150128	244	92	21	63
87	124	USA-CA	SALTON SEA, IMPERIAL VAL.	33.0N 116.0W	28.3N 114.2W	0	LO	250	N	N	19910409	150131	244	93	21	63
98	73	USA-CA	MOJAVE DESERT	37.6N 116.1W	27.6N 116.1W	40	HO	250	N	N	19910407	143936	246	90	14	32
98	74	USA-CA	SALTON SEA, IMPERIAL VLY	33.2N 115.8W	27.6N 115.7W	5	HO	250	N	N	19910407	143941	246	90	15	32
153	14	USA-CA	LOS ANGELES, MOJAVE DES.	35.0N 116.0W	28.5N 121.5W	10	HO	250	N	N	19910409	145945	243	89	15	63
78	23	USA-CO	SANGRE DE CRISTO MTS.	37.0N 105.0W	27.6N 106.8W	5	HO	250	N	N	19910409	150320	244	96	28	63
83	59	USA-CO	PECOS R/VALLEY, E. ROCKIES	38.0N 106.0W	27.1N 102.9W	5	HO	100	N	N	19910409	150418	244	98	32	63
153	17	USA-CO	ROCKY MTS., COLORADO PL	37.0N 107.0W	28.2N 112.1W	10	HO	250	N	N	19910409	150202	244	94	23	63
153	22	USA-CO	ROCKY MTS., SAN JUAN MT	38.0N 106.0W		10	HO	250	N	Y						
75	42	USA-FL	CENTRAL FL., CLDY, HAZEY	28.5N 81.5W	28.5N 77.1W	80	LO	250	N	N	19910406	134848	247	104	37	16
75	43	USA-FL	CENTRAL FL., CLDY, HAZEY	28.5N 81.5W	28.5N 76.4W	80	LO	250	N	N	19910406	134858	247	105	38	16
75	44	USA-FL	CENTRAL FL., CLDY, HAZEY		28.4N 74.9W	90	HO	250	N	N	19910406	134919	246	106	39	16
75	45	USA-FL	CENTRAL FL., CLDY, HAZEY		28.3N 72.5W	90	HO	250	N	N	19910406	134954	246	107	41	16
76	2	USA-FL	AREA E. OF PANAMA CITY	30.0N 85.0W	6.1N 44.7W	50	LO	250	N	N	19910409	150729	245	104	44	63
76	3	USA-FL	CENTRAL FL., VRY CLDY	28.5N 81.5W	5.4N 43.4W	90	LO	250	N	N	19910409	150808	245	105	46	63
76	4	USA-FL	CENTRAL FL., VRY CLDY		4.9N 42.6W	90	LO	250	N	N	19910409	150853	245	106	49	63
77	59	USA-FL	CENTRAL FL., VRY CLDY	28.5N 81.0W	28.5N 78.0W	90	LO	250	N	N	19910406	134834	247	104	38	16
77	60	USA-FL	CENTRAL FL., VRY CLDY	28.5N 81.0W	28.5N 77.5W	90	LO	250	N	N	19910406	134842	247	104	37	16
77	61	USA-FL	TAMPA AREA, VRY CLDY	27.8N 81.5W	28.5N 76.0W	80	LO	250	N	N	19910406	134904	247	105	38	16
78	27	USA-FL	CAPE CANAVERAL	28.5N 80.5W	4.8N 42.5W	60	LO	250	N	N	19910409	150928	245	107	52	63
78	28	USA-FL	CENT. FLORIDA, SARASOTA	27.5N 80.0W	4.9N 42.8W	50	LO	250	N	N	19910409	151004	245	108	54	63
92	95	USA-FL	VRY CLDY		28.4N 82.8W	90	LO	250	N	N	19910407	130829	246	96	24	31
92	96	USA-FL	UNDEREXP., CAPE KENNEDY	28.5N 80.5W	28.5N 80.6W	10	LO	250	N	N	19910407	130900	246	96	26	31
92	97	USA-FL	CAPE KENNEDY	28.5N 80.5W	28.5N 78.4W	30	LO	250	N	N	19910407	130933	246	97	28	31
92	98	USA-FL	N. OF CAPE KENNEDY	28.7N 80.8W	28.5N 78.2W	50	LO	250	N	N	19910407	130936	246	98	28	31
92	99	USA-FL	S. FL. EVERGLADES AREA	24.8N 81.0W	28.5N 76.2W	30	LO	250	N	N	19910407	131004	246	99	30	31
92	100	USA-FL	S. FL. EVERGLADES AREA	26.0N 80.6W	28.5N 76.0W	30	LO	250	N	N	19910407	131007	246	99	30	31
92	105	USA-FL	S. FL.	26.2N 80.7W	28.4N 72.4W	60	LO	250	N	N	19910407	131100	246	101	33	31
97	101	USA-FL	SO. FL., EVERGLADES, CLDS.	25.2N 80.6W	25.6N 81.8W	90	LO	250	N	N	19910406	120818	246	88	11	15

**TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)**

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		MADIR		CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN	EL	OR
				LAT	LONG	LAT	LONG												
97	103	USA-FL	SO. FL., EVERGLADES	25.0N	80.6W	26.1N	79.4W	60	LO	250	N	N	19910406	120855	246	89	13	15	
99	39	USA-FL	GRO DEPLOY DK/SO. FLORIDA	28.5N	81.0W	28.5N	79.9W	60	LO	40	N	N	19910407	130911	246	97	26	31	
99	40	USA-FL	GRO DEPLOY DK/SO. FLORIDA	28.5N	81.0W	28.5N	79.5W	60	LO	40	N	N	19910407	130918	246	97	27	31	
99	41	USA-FL	GRO DEPLOY DK/SO. FLORIDA	28.5N	81.0W	28.5N	79.1W	60	LO	40	N	N	19910407	130922	246	97	27	31	
99	42	USA-FL	GRO DEPLOY DK/SO. FLORIDA	28.5N	81.0W	28.5N	78.8W	60	LO	40	N	N	19910407	130927	246	97	27	31	
99	43	USA-FL	GRO DEPLOY DK/SO. FLORIDA	28.5N	81.0W	28.5N	78.4W	60	LO	40	N	N	19910407	130932	246	97	28	31	
99	44	USA-FL	GRO DEPLOY DK/SO. FLORIDA	28.5N	80.0W	28.5N	78.0W	50	LO	40	N	N	19910407	130938	246	98	28	31	
99	45	USA-FL	GRO DEPLOY DK/SO. FLORIDA	28.5N	79.0W	28.5N	77.4W	50	LO	40	N	N	19910407	130947	246	98	28	31	
99	46	USA-FL	GRO DEPLOY DK/SO. FLORIDA	28.5N	79.0W	28.5N	76.4W	60	HO	40	N	N	19910407	131002	246	99	29	31	
10	3	USA-HI	HAWAIIAN ISLANDS	21.0N	158.0W	26.2N	167.2W	35	HO	35	N	N	19910410	190807	245	96	30	81	
10	4	USA-HI	OAHU, KAUAI, MOLOKAI	21.0N	158.0W	24.2N	158.7W	35	LO	35	N	N	19910410	191019	245	99	38	81	
10	5	USA-HI	OAHU, MOLOKAI, MAUI	21.0N	157.0W	23.9N	157.7W	30	LO	35	N	N	19910410	191038	245	100	39	81	
10	6	USA-HI	BIG ISLAND OF HAWAII	20.0N	156.0W	22.9N	154.3W	35	LO	35	N	N	19910410	191129	246	101	43	81	
10	7	USA-HI	BIG ISLAND OF HAWAII	20.0N	155.0W	22.5N	153.1W	35	LO	35	N	N	19910410	191149	246	101	44	81	
10	8	USA-HI	HAWAIIAN ISLANDS	21.0N	157.0W	22.4N	152.7W	35	HO	35	N	N	19910410	191156	246	101	44	81	
71	12	USA-HI	KAUAI-CLOUD COVERED	22.5N	159.5W	24.7N	159.1W	40	LO	250	F	N	19910405	172604	246	89	13	3	
71	13	USA-HI	NIHAU, KAUAI	22.0N	160.0W	24.8N	158.6W	40	LO	250	N	N	19910405	172611	246	89	13	3	
71	14	USA-HI	MAUI, LANAI, KAHOO LAWE	21.0N	156.5W	25.0N	158.0W	40	LO	250	N	N	19910405	172621	246	89	14	3	
71	15	USA-HI	MAUI, LANAI, KAHOO LAWE	21.0N	156.5W	25.4N	156.5W	35	LO	250	N	N	19910405	172645	246	90	15	3	
71	16	USA-HI	MAUI, LANAI, KAHOO LAWE	21.0N	156.5W	25.5N	155.7W	35	LO	250	F	N	19910405	172656	246	91	16	3	
71	17	USA-HI	HAWAII, MAUI, KAHOO LAWE	20.0N	156.0W	25.7N	155.0W	35	LO	250	N	N	19910405	172707	246	91	17	3	
71	76	USA-HI	FRENCH FRIGATE SHOALS	24.0N	166.0W	28.0N	164.4W	45	LO	250	N	N	19910405	190411	246	99	30	4	
73	32	USA-HI	MIDWAY ISLANDS	28.2N	177.3W	26.5N	176.9W	30	LO	250	N	N	19910406	214052	246	117	53	21	
73	33	USA-HI	KURE & GREEN ISLANDS	28.4N	178.2W	26.2N	175.4W	10	LO	250	N	N	19910406	214111	246	118	54	21	
73	34	USA-HI	LISIANSKI IS., NEVA SHOAL	26.0N	174.0W	25.9N	173.4W	10	LO	250	N	N	19910406	214138	246	120	56	21	
73	35	USA-HI	LISIANSKI IS., NEVA SHOAL			25.4N	171.6W	30	LO	250	N	N	19910406	214208	246	121	58	21	
73	36	USA-HI	FRENCH FRIGATE SHOALS	23.8N	166.2W	24.6N	168.3W	20	LO	250	N	N	19910406	214300	246	125	61	21	
73	37	USA-HI	FRENCH FRIGATE SHOALS	23.8N	166.2W	24.1N	166.3W	20	LO	250	N	N	19910406	214330	246	127	63	21	
73	38	USA-HI	KAUIA	21.9N	160.2W	22.5N	160.9W	20	LO	250	N	N	19910406	214457	245	134	68	21	
73	39	USA-HI	KAUIA	22.0N	159.5W	22.2N	160.0W	50	LO	250	N	N	19910406	214512	245	136	69	21	
73	40	USA-HI	OAHUA	21.5N	158.0W	21.3N	157.5W	50	LO	250	N	N	19910406	214553	245	141	71	21	
73	41	USA-HI	OAHUA	21.5N	158.0W	21.3N	157.2W	50	LO	250	N	N	19910406	214557	245	141	71	21	
73	42	USA-HI	MAUI	20.9N	156.6W	20.6N	155.4W	60	LO	250	N	N	19910406	214627	245	145	73	21	
73	43	USA-HI	HAWAII	19.5N	155.6W	20.2N	154.4W	50	LO	250	N	N	19910406	214644	245	148	74	21	
92	36	USA-HI	NIHAU ISLAND	21.9N	160.1W	22.5N	160.8W	20	LO	250	N	N	19910406	214458	245	135	68	21	
92	37	USA-HI	KAPAA ISLAND	22.0N	159.5W	22.4N	160.5W	50	LO	250	N	N	19910406	214503	245	135	68	21	
92	38	USA-HI	OAHU ISLAND	21.5N	158.0W	22.0N	159.3W	40	LO	250	N	N	19910406	214523	245	137	69	21	
92	39	USA-HI	MOLOKAI, MAUI, LANAI	21.1N	156.9W	21.6N	158.1W	40	LO	250	N	N	19910406	214542	245	139	70	21	
92	40	USA-HI	MAUI	20.8N	156.3W	21.3N	157.4W	70	LO	250	N	N	19910406	214554	245	141	71	21	
92	41	USA-HI	HAWAII	19.8N	155.7W	21.1N	156.9W	70	LO	250	N	N	19910406	214603	245	142	71	21	



TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		MADIR		CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM	EL	OR
				LAT	LONG	LAT	LONG												
92	42	USA-HI	HAWAII	19.4N	155.7W	20.9N	156.3W	60	LO	250	N	N	19910406	214612	245	143	72	21	
94	42	USA-HI	OAHU, MOLOKAI, LANAI	22.0N	157.5W			35	LO	100	N	N							
94	43	USA-HI	HAWAII, MONA LOA, KEA V.	19.5N	155.5W			50	LO	100	N	N							
94	44	USA-HI	OAHU, KAUAI	22.0N	159.5W			35	LO	100	N	N							
94	45	USA-HI	KAUAI, OAHU, MOLOKAI	21.5N	158.0W			25	LO	100	N	N							
94	46	USA-HI	HAWAII, MAUI, LANAI	21.0N	156.5W			45	LO	100	N	N							
94	47	USA-HI	HAWAII, MAUI, MAUNA LOA	20.0N	155.0W			55	LO	100	N	N							
152	73	USA-HI	OAHU, MOLOKAI, LANAI	21.5N	157.5W	21.6N	158.1W	35	NV	250	N	Y	19910406	214542	245	139	70	21	
152	74	USA-HI	MOLOKAI, LANAI, MAUI	21.5N	157.0W	21.3N	157.2W	40	NV	250	N	Y	19910406	214557	245	141	71	21	
152	75	USA-HI	HAWAII, MAUNA KEA-CLOUDS	20.5N	155.0W	20.8N	156.0W	90	NV	250	N	Y	19910406	214618	245	144	72	21	
152	76	USA-HI	MAUI-CLOUDS	20.5N	155.5W	20.4N	154.9W	90	NV	250	N	Y	19910406	214635	245	146	73	21	
153	69	USA-HI	BIG IS. OF HAWAII, VOL.	20.5N	154.0W	23.4N	158.0W	75	HO	250	N	N	19910409	194852	247	104	47	86	
153	15	USA-NE	L. MEAD, GRAND CANYON	36.5N	115.0W	28.4N	115.2W	15	HO	250	N	N	19910409	150117	244	92	21	63	
78	20	USA-NM	SW N. MEXICO NEAR DEMING	32.5N	108.5W	27.7N	107.6W	0	LO	250	N	N	19910409	150309	244	96	27	63	
78	21	USA-NM	WHITE SANDS, LAS CRUCES	33.0N	106.5W	27.7N	107.4W	0	LO	250	N	N	19910409	150312	244	96	28	63	
78	22	USA-NM	N. RIO GRANDE RIFT VAL.	35.5N	106.0W	27.7N	107.1W	0	HO	250	N	N	19910409	150318	244	96	28	63	
78	24	USA-NM	GUADALUPE MTNS.	32.0N	105.0W	27.6N	106.4W	0	LO	250	N	N	19910409	150326	244	96	28	63	
79	9	USA-NM	WHITE SANDS, ALAMOGORDO	33.0N	106.5W	28.4N	108.0W	0	LO	250	N	Y	19910406	152031	246	99	30	17	
79	10	USA-NM	WHITE SANDS, ALAMOGORDO	33.0N	106.5W	28.4N	107.7W	0	LO	250	N	Y	19910406	152035	246	99	30	17	
79	13	USA-NM	CABILLO RES., BLACK RA.	33.0N	107.0W	28.5N	105.5W	0	LO	250	N	Y	19910406	152107	246	101	32	17	
83	56	USA-NM	WHITE SANDS, RIO GRANDE	33.0N	103.5W	27.6N	106.2W	5	LO	100	N	Y	19910409	150330	244	97	29	63	
83	57	USA-NM	WHITE SANDS, PECOS R/VAL.	33.0N	105.0W	27.4N	104.9W	5	HO	100	N	Y	19910409	150348	244	97	30	63	
152	271	USA-NM	SACRAMENTO MOUNTAINS	34.0N	105.0W	28.5N	101.4W	20	HO	250	N	Y	19910407	144311	246	98	28	32	
153	19	USA-NM	SANGRE DE CRISTO MTNS.	36.0N	104.0W	28.1N	111.4W	10	HO	250	N	N	19910409	150212	244	94	24	63	
153	23	USA-NM	RIO GRANDE RIFT VALLEY	35.0N	108.5W	27.7N	107.0W	5	LO	250	N	Y	19910409	150318	244	96	28	63	
16	4	USA-NV	VIEW N. OF GREAT BASIN	37.0N	115.0W	25.0N	113.9W	15	HO	35	N	N	19910410	160235	246	99	36	79	
78	4	USA-NV	LAKE MEAD, LAS VEGAS	36.5N	115.0W	28.2N	112.5W	0	HO	250	N	N	19910409	150156	244	93	23	63	
83	61	USA-OK	RED R, CANADIAN R, PLAINS	37.0N	98.0W	26.8N	100.8W	10	HO	100	N	N	19910409	150450	245	99	34	63	
152	270	USA-OK	LLANO ESTACADO-PALO DURO	37.0N	100.0W	28.5N	102.7W	25	HO	250	N	N	19910407	144252	246	97	27	32	
75	79	USA-TX	AMISTAD RES., VRY CLDY	29.5N	101.0W	28.5N	99.4W	90	LO	250	N	N	19910406	152237	246	105	38	17	
79	11	USA-TX	EL PASO, RIO GRANDE	31.5N	106.5W	28.4N	107.3W	0	LO	250	N	Y	19910406	152041	246	100	31	17	
79	12	USA-TX	EL PASO, RIO GRANDE	31.5N	106.5W	28.5N	106.5W	0	LO	250	N	Y	19910406	152053	246	100	31	17	
79	14	USA-TX	GUADALUPE PK., SALT BAS.	32.0N	105.0W	28.5N	102.8W	5	LO	250	N	N	19910406	152147	246	103	35	17	
79	15	USA-TX	AMISTAD RESERVOIR	29.5N	101.0W	28.5N	100.5W	50	LO	250	N	N	19910406	152220	246	104	37	17	
83	58	USA-TX	LLANO ESTACADO, RED R.	33.5N	101.5W	27.3N	104.1W	5	HO	100	N	N	19910409	150401	244	98	31	63	
83	60	USA-TX	LLANO ESTACADO, PERMIAN B	33.0N	101.0W	27.0N	102.1W	5	HO	100	N	N	19910409	150431	244	99	33	63	
83	64	USA-TX	NW PANORAMA, WHITE SANDS	31.0N	104.0W	25.9N	96.5W	10	HO	100	N	N	19910409	150555	245	101	38	63	
83	66	USA-TX	NW PANORAMA, WHITE SANDS			25.4N	93.8W	50	HO	100	N	N	19910409	150636	245	102	41	63	
98	80	USA-TX	WEST TEXAS			28.5N	104.5W	50	HO	250	N	N	19910407	144228	246	96	25	32	
98	84	USA-TX	WEST TEXAS			27.0N	106.2W	9	LO	250	N	N	19910407	162116	246	109	45	33	

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL	OR
152	272	USA-TX	TX-NEW MEXICO-MIDLAND	33.0N 103.0W	28.5N 100.8W	10	LO	250	N	Y	19910407	144320	246	98	29	32
152	273	USA-TX	TX-NEW MEXICO-AMARILLO	36.0N 103.0W	28.5N 99.3W	40	HO	250	N	N	19910407	144341	246	99	30	32
153	27	USA-TX	EDWARDS PL., STAKED PLA.	32.0N 102.5W		25	HO	250	N	N						
83	55	USA-UT	COLORADO PLATEAUS/RIVER	37.5N 111.0W	27.9N 109.1W	10	HO	100	N	N	19910409	150246	244	95	28	63
153	18	USA-UT	FOUR CORNERS REGION	37.0N 109.0W		15	HO	250	N	Y						
153	21	USA-UT	FOUR CORNERS, PAINTED D.	37.0N 109.5W	27.8N 107.8W	15	HO	250	N	Y	19910409	150305	244	96	27	63
152	274	USA-VA	EAST COAST-NC,VA,PAMLICO	37.0N 76.0W	27.2N 83.5W	10	HO	250	N	Y	19910407	144734	246	109	45	32
152	275	USA-VA	NC,VA,E.COAST-DOUBLE EXP		25.8N 75.7W	20	HO	250	N	Y	19910407	144931	246	114	52	32
152	276	USA-VA	NC,VA,E.COAST-DOUBLE EXP		25.6N 74.7W	20	HO	250	N	Y	19910407	144947	246	115	53	32
71	70	VENEZUELA	GULF OF VENEZUELA	11.0N 71.5W	14.7N 71.7W	65	LO	250	N	Y	19910405	174835	244	241	73	3
71	71	VENEZUELA	MARACAIBO	11.0N 71.5W	14.5N 71.3W	65	LO	250	N	Y	19910405	174842	244	242	72	3
72	22	VENEZUELA	RIO ORINOCO	8.5N 62.5W	8.9N 60.6W	85	LO	100	N	Y	19910405	175158	243	265	63	3
72	23	VENEZUELA	RIO GRANDE DELTA	9.0N 60.5W	8.4N 59.7W	70	NV	100	N	Y	19910405	175215	243	266	62	3
75	92	VENEZUELA	ISLA DE MARGARITA	11.0N 64.0W	11.2N 63.0W	80	LO	250	N	N	19910406	171213	244	252	74	18
75	93	VENEZUELA	ORINOCO RIVER DELTA		10.6N 61.8W	95	LO	250	N	N	19910406	171235	244	256	73	18
75	94	VENEZUELA	ORINOCO RIVER DELTA		10.4N 61.4W	95	LO	250	N	N	19910406	171242	244	257	73	18
75	95	VENEZUELA	ORINOCO RIVER DELTA	10.0N 62.5W	10.3N 61.2W	90	LO	250	N	N	19910406	171247	244	258	73	18
75	96	VENEZUELA	ORINOCO RIVER DELTA	10.0N 62.5W	10.0N 60.6W	90	LO	250	N	N	19910406	171257	244	259	72	18
75	97	VENEZUELA	ORINOCO RIVER DELTA	9.0N 59.7W	8.8N 58.5W	60	LO	250	N	N	19910406	171336	244	264	70	18
79	21	VENEZUELA	MARGARITA, COCHE ISLANDS	11.5N 64.5W	12.9N 66.2W	45	LO	250	N	N	19910406	171115	244	239	77	18
79	22	VENEZUELA	ORINOCO RIVER, CARONI R.	9.5N 63.5W	12.1N 64.7W	70	LO	250	N	Y	19910406	171142	244	246	76	18
79	23	VENEZUELA	ORINOCO RIVER, CARONI R.	9.0N 62.5W	12.0N 64.5W	70	LO	250	N	Y	19910406	171145	244	246	76	18
79	24	VENEZUELA	ORINOCO RIVER MOUTH	9.0N 62.0W	11.9N 64.3W	80	LO	250	N	Y	19910406	171149	244	247	76	18
79	25	VENEZUELA	ORINOCO RIVER MOUTH	9.0N 60.5W	11.7N 63.8W	60	LO	250	N	N	19910406	171158	244	249	75	18
90	108	VENEZUELA	ORINOCO R/DELTA-CLO COV.	9.0N 60.5W	9.0N 58.8W	50	LO	250	N	N	19910406	171331	244	263	71	18
90	109	VENEZUELA	CANO MACAREO-ORINOCO DEL	9.8N 61.6W	8.6N 58.1W	70	LO	250	N	N	19910406	171343	244	264	70	18
151	106	VIETNAM	SOUTHERN PART		18.8N 111.8E	45	HO	250	N	Y	19910406	043957	245	185	77	10
151	107	VIETNAM	SOUTHERN PART		18.4N 112.9E	45	LO	250	N	Y	19910406	044015	245	190	77	10
151	142	VIETNAM	COAST-GULF OF THAILAND	10.5N 104.5E	10.4N 105.7E	45	LO	250	N	N	19910406	061839	244	259	70	11
151	144	VIETNAM	SOUTH TIP VIETNAM,SUNG LI	9.0N 105.0E	10.0N 106.4E	25	LO	250	N	Y	19910406	061852	244	261	69	11
151	145	VIETNAM	MOUTHS OF THE MEKONG	10.0N 106.5E	9.7N 107.1E	45	NV	250	N	Y	19910406	061904	243	262	68	11
152	121	VIETNAM	S. TIP-MOUTHS OF MEKONG	9.5N 105.5E	12.5N 103.7E	55	LO	250	N	N	19910407	053859	244	233	80	26
152	122	VIETNAM	SOUTH COAST-HO CHI MINH	10.5N 107.5E	12.1N 104.4E	55	LO	250	N	N	19910407	053912	244	237	79	26
152	123	VIETNAM	EAST COAST-NHA TRANG I.	12.5N 109.0E	11.8N 104.9E	60	LO	250	N	N	19910407	053922	244	240	79	26
152	126	VIETNAM	SOUTHEAST COAST	12.0N 108.5E	10.7N 107.0E	50	LO	250	N	N	19910407	054000	244	250	78	26
152	128	VIETNAM	SUNG LINT, EDDIES, MEKONG	10.0N 108.0E	9.9N 108.6E	40	NV	250	N	Y	19910407	054030	244	256	76	26
152	129	VIETNAM	SUNG LINT, EDDIES, MEKONG	10.5N 107.5E	9.5N 109.3E	60	LO	250	N	Y	19910407	054043	244	259	76	26
152	130	VIETNAM	MOUTHS OF MEKONG	9.5N 106.5E	9.2N 109.8E	50	LO	250	N	N	19910407	054052	244	260	75	26
152	131	VIETNAM	SE COAST	12.0N 109.5E	8.8N 110.6E	50	LO	250	N	N	19910407	054108	244	262	74	26
153	180	VIETNAM	NHA TRANG, CAM RANH BAY	12.5N 108.5E	13.1N 108.1E	40	NV	250	N	N	19910410	034328	247	106	73	71

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	CENTER LON	MADR LAT	MADR LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL	OR
153	181	VIETNAM	DOUBLE EXPOSURE	18.4N	65.0W	12.2N	109.9E	65	LO	250	O	N	19910410	034402	247	105	75	71
74	40	VIRGIN ISLANDS	VIEQUES TO ANEGADA ISLES	18.4N	65.0W	6.2N	22.4W	50	LO	250	N	N	19910409	133549	245	105	48	62
76	39	VIRGIN ISLANDS	ST THOMAS & JOHN ISLANDS	18.4N	64.9W	8.4N	51.0W	60	LO	250	N	N	19910409	151508	244	113	73	63
76	40	VIRGIN ISLANDS	ST THOMAS & JOHN ISLANDS	18.4N	64.8W	8.4N	51.2W	50	LO	250	N	N	19910409	151517	244	113	74	63
76	41	VIRGIN ISLANDS	ST THOMAS & JOHN ISLANDS	18.3N	64.8W	8.5N	51.4W	50	LO	250	N	N	19910409	151528	244	113	75	63
9	21	WESTERN SAHARA	PANORAMIC VIEW	23.0N	14.0W	25.9N	20.4W	20	HO	35	N	N	19910411	090954	245	94	28	90
9	22	WESTERN SAHARA	PANORAMIC VIEW	21.0N	13.0W	25.5N	18.8W	30	HO	35	N	N	19910411	091019	245	95	29	90
9	26	WESTERN SAHARA	COASTAL AREA	24.0N	14.0W	24.0N	13.0W	70	LO	35	N	N	19910411	091149	245	97	35	90
9	27	WESTERN SAHARA	NW MAURITANIA	23.4N	10.9W	23.4N	10.9W	0	HO	35	N	N	19910411	091223	246	97	37	90
9	28	WESTERN SAHARA	NW MAURITANIA	22.7N	8.6W	22.7N	8.6W	0	LO	35	N	N	19910411	091259	246	98	39	90
83	1	WESTERN SAHARA	CAP BLANC PENINSULA, CST.	21.0N	17.2W	24.3N	18.0W	25	LO	100	N	N	19910409	102732	246	105	46	80
90	27	WESTERN SAHARA	TINDOUF SYNCLINE, HAMRA W	26.9N	11.4W	26.8N	11.3W	5	NV	250	N	N	19910406	104622	246	119	54	14
90	34	WESTERN SAHARA	RIO DE ORO PEN. COAST	23.3N	16.0W	22.2N	16.8W	0	LO	250	O	Y	19910406	122435	245	143	70	15
90	35	WESTERN SAHARA	RIO DE ORO PEN. COAST	23.5N	15.9W	21.9N	16.0W	0	LO	250	O	Y	19910406	122448	245	145	71	15
95	14	WESTERN SAHARA	COAST, CONVEYOR BELT	26.8N	12.9W	27.6N	17.2W	5	NV	250	N	N	19910406	104453	246	114	49	14
95	15	WESTERN SAHARA	CONVEYOR BELT, INTERIOR	26.8N	12.9W	27.4N	15.5W	0	NV	250	N	N	19910406	104519	246	116	50	14
95	16	WESTERN SAHARA	EAST INTERIOR	26.7N	9.5W	27.3N	14.6W	0	NV	250	N	N	19910406	104532	246	116	51	14
97	57	WESTERN SAHARA	COAST	26.4N	13.0W	27.5N	15.7W	30	LO	250	N	N	19910406	104516	246	115	50	14
97	60	WESTERN SAHARA	NO. CENTRAL	26.9N	11.0W	27.0N	12.6W	5	LO	250	N	N	19910406	104602	246	118	53	14
97	61	WESTERN SAHARA	NO. CENTRAL	26.2N	11.0W	26.8N	11.4W	0	LO	250	N	N	19910406	104620	246	119	54	14
97	62	WESTERN SAHARA	COAST, CONVEYOR BELT SCAR	26.9N	12.0W	26.6N	10.4W	10	LO	250	N	N	19910406	104635	246	120	55	14
98	38	WESTERN SAHARA	COAST, SALT FLATS	27.7N	12.8W	27.3N	12.9W	40	LO	250	N	N	19910407	100701	246	109	45	29
151	240	WESTERN SAHARA	COAST-INDS CONVEYOR BELT	26.0N	14.5W	27.2N	13.6W	50	LO	250	N	N	19910406	104547	246	117	52	14
151	241	WESTERN SAHARA	TINDOUF SYNCLINE	27.0N	12.0W	26.7N	10.9W	20	LO	250	N	N	19910406	104628	246	120	54	14
152	266	YEMEN (SAMA)	SAB'ATAYN DUNES-MA'RIB	16.0N	46.0E	17.2N	45.9E	10	LO	250	N	N	19910407	084253	245	159	78	28
82	103	YEMEN (ADEN)	BAHR AS SAFI	16.4N	45.9E	16.4N	45.9E	20	LO	250	N	Y	19910406	092154	245	209	78	13
82	104	YEMEN (ADEN)	BAHR AS SAFI	16.3N	46.1E	16.3N	46.1E	5	LO	250	N	Y	19910406	092158	245	210	78	13
82	105	YEMEN (ADEN)	BAHR AS SAFI	16.2N	46.3E	16.2N	46.3E	5	LO	250	N	Y	19910406	092201	245	211	78	13
82	106	YEMEN (ADEN)	BAHR AS SAFI	16.1N	46.5E	16.1N	46.5E	0	LO	250	N	Y	19910406	092204	245	212	78	13
82	107	YEMEN (ADEN)	BAHR AS SAFI	1.4N	48.6E	14.4N	50.1E	5	LO	250	N	N	19910406	092309	244	232	77	13
85	50	YEMEN (ADEN)	COAST, SUNGLINT	16.2N	52.5E	16.5N	51.3E	0	LO	250	N	N	19910409	072639	246	115	70	58
85	51	YEMEN (ADEN)	COAST, SUNGLINT	16.2N	52.5E	16.3N	51.7E	0	LO	250	N	N	19910409	072647	246	116	71	58
90	17	YEMEN (ADEN)	SHIBAM, WADI SARR, W. AMD	16.0N	48.0E	16.0N	46.6E	5	LO	250	N	N	19910406	092207	244	213	78	13
90	18	YEMEN (ADEN)	PT. MUDAH, COAST	14.7N	49.0E	15.1N	48.6E	15	NV	250	N	N	19910406	092242	244	224	77	13
90	19	YEMEN (ADEN)	GHAYDAH, MAHRAT MTNS, CST.	16.0N	52.5E	14.7N	49.4E	5	LO	250	N	N	19910406	092256	244	228	77	13
90	20	YEMEN (ADEN)	PT. SHARWAYN, W. MASILAH	15.0N	51.0E	13.7N	51.5E	30	LO	250	N	N	19910406	092334	244	238	76	13
92	88	YEMEN (ADEN)	DISSECTED PLATEAU	16.0N	48.5E	16.3N	48.0E	0	LO	250	N	N	19910407	084330	245	170	80	28
92	89	YEMEN (ADEN)	COASTAL AREA	15.2N	51.5E	15.5N	49.7E	0	LO	250	N	N	19910407	084359	245	180	81	28
95	1	YEMEN (ADEN)	OIL SLICKS, SHIP WAKES	1.4N	49.4E	14.6N	49.6E	5	NV	250	N	N	19910406	092300	244	230	77	13
95	2	YEMEN (ADEN)	COAST	1.4N	48.6E	14.4N	50.1E	5	NV	250	N	N	19910406	092309	244	232	77	13

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
95	3	YEMEN (ADEN)	COAST, OIL SLICKS	14.0N 49.0E	14.3N 50.4E	5	NV	250	N	N	19910406	092313	244	233	76	13
95	4	YEMEN (ADEN)	COAST	14.8N 49.7E	14.2N 50.5E	5	NV	250	N	N	19910406	092316	244	234	76	13
95	5	YEMEN (ADEN)	COAST	14.8N 50.5E	14.1N 50.8E	5	NV	250	N	N	19910406	092321	244	235	76	13
95	6	YEMEN (ADEN)	COAST, SEDIMENT TRANSP.	15.1N 51.4E	13.4N 52.2E	5	NV	250	N	N	19910406	092347	244	241	75	13
97	37	YEMEN (ADEN)	COAST	15.5N 49.4E	16.7N 45.1E	5	LO	250	N	N	19910406	092140	245	204	78	13
97	38	YEMEN (ADEN)	COAST	15.5N 50.5E	16.2N 46.3E	5	LO	250	N	N	19910406	092201	245	211	78	13
97	39	YEMEN (ADEN)	COAST	15.6N 50.5E	16.1N 46.6E	5	LO	250	N	N	19910406	092206	244	213	78	13
98	7	YEMEN (ADEN)	COAST, BURUM	14.8N 49.0E	15.9N 48.8E	10	LO	250	N	N	19910407	084344	245	175	80	28
98	8	YEMEN (ADEN)	COAST, GULF OF ADEN	15.0N 50.0E	14.9N 50.9E	10	LO	250	N	N	19910407	084421	245	190	81	28
151	232	YEMEN (ADEN)	AS SAB'ATAYN DUNES	16.0N 47.0E	16.2N 46.3E	5	NV	250	N	Y	19910406	092201	245	211	78	13
151	233	YEMEN (ADEN)	WADI DAW'AN-COAST	15.5N 48.5E	15.5N 47.7E	5	NV	250	N	Y	19910406	092226	244	219	78	13
151	234	YEMEN (ADEN)	HADRAMAWT MNTS.-COAST	15.0N 49.0E	15.1N 48.6E	5	NV	250	N	Y	19910406	092242	244	224	77	13
151	235	YEMEN (ADEN)	COAST	14.0N 50.5E	14.6N 49.7E	15	NV	250	N	Y	19910406	092302	244	230	77	13
152	267	YEMEN (ADEN)	HADRAMAUT PLATEAU	17.0N 49.0E	16.5N 47.5E	15	LO	250	N	N	19910407	084321	245	166	79	28
152	268	YEMEN (ADEN)	COAST-VOLCANOS-LAVA	15.5N 51.5E	14.9N 51.0E	10	NV	250	N	N	19910407	084423	245	190	81	28
98	2	YEMEN (SANA)	COAST, RED SEA	16.0N 43.0E	18.0N 44.2E	0	LO	250	N	N	19910407	084223	245	152	77	28
98	4	YEMEN (SANA)	CULTIVATED VALLEYS	17.0N 44.5E	16.7N 45.2E	10	NV	250	N	Y	19910407	084234	245	155	77	28
151	231	YEMEN (SANA)	WADI NAJRAN-NAIRAN	2.0N 31.0E	4.4N 30.4E	95	LO	35	N	N	19910411	092433	248	66	80	90
9	34	ZAIRE	PART OF LAKE ALBERT	2.0N 31.0E	4.4N 30.4E	95	LO	35	N	N	19910411	092433	248	66	80	90
13	5	ZAIRE	CLOUDS	6.5N 25.0E	6.5N 25.0E	50	LO	35	U	N	19910410	100113	248	74	85	75
13	6	ZAIRE	CLOUDS	4.8N 28.0E	4.8N 28.0E	70	LO	35	U	N	19910410	100210	248	30	86	75
77	31	ZAIRE	NORTHERN BORDER W C.A.R.	4.8N 20.9E	4.8N 20.9E	80	LO	250	N	N	19910406	123539	243	274	61	15
77	32	ZAIRE		2.8N 23.7E	2.8N 23.7E	80	LO	250	N	N	19910406	123639	243	277	57	15
77	33	ZAIRE	VRY CLOUDY	0.6N 27.5E	0.6N 27.5E	100	LO	250	N	N	19910406	123752	243	279	53	15
77	86	ZAIRE		3.0S 9.9E	3.0S 9.9E	90	LO	250	N	N	19910406	141315	242	282	46	16
77	87	ZAIRE		3.5S 10.6E	3.5S 10.6E	90	LO	250	N	N	19910406	141330	242	282	45	16
77	88	ZAIRE		4.5S 12.3E	4.5S 12.3E	80	LO	250	N	N	19910406	141403	242	283	43	16
77	89	ZAIRE		4.7S 12.7E	4.7S 12.7E	80	LO	250	N	N	19910406	141410	242	283	43	16
80	63	ZAIRE	RIVER PATTERNS	2.3S 14.3E	2.3S 14.3E	65	LO	250	N	N	19910409	121740	246	298	69	61
80	64	ZAIRE	RIVER PATTERNS	2.5S 14.7E	2.5S 14.7E	80	LO	250	N	N	19910409	121747	246	298	68	61
80	65	ZAIRE	RIVER PATTERNS	2.6S 14.9E	2.6S 14.9E	85	LO	250	N	N	19910409	121752	246	298	68	61
80	66	ZAIRE	CONGO RIVER	2.5S 16.0E	2.5S 16.0E	65	NV	250	N	N	19910409	121758	246	298	68	61
80	68	ZAIRE	CONGO, KMA RIVERS	3.0S 16.5E	3.1S 15.7E	45	LO	250	N	Y	19910409	121806	246	298	67	61
80	69	ZAIRE	CONGO, KMA RIVERS	3.5S 16.0E	3.2S 15.9E	50	LO	250	N	Y	19910409	121810	246	298	67	61
80	70	ZAIRE	CONGO RIVER	3.5S 16.0E	3.3S 16.0E	60	LO	250	N	Y	19910409	121813	246	298	67	61
80	71	ZAIRE	BRAZZAVILLE, KINSHASA	4.0S 15.5E	3.4S 16.2E	45	LO	250	N	Y	19910409	121816	246	298	67	61
80	72	ZAIRE	CONGO RIVER	5.0S 14.5E	3.7S 16.7E	50	LO	250	N	N	19910409	121826	246	298	66	61
80	74	ZAIRE	CONGO, KMA RIVERS	3.5S 16.0E	4.1S 17.5E	60	LO	250	N	Y	19910409	121841	246	298	65	61
80	75	ZAIRE	CONGO, KMA RIVERS	3.0S 16.5E	4.2S 17.6E	50	LO	250	N	Y	19910409	121843	246	298	65	61
80	76	ZAIRE	KWA, FIMI, KWANGO RIVERS	3.0S 17.0E	4.3S 17.7E	55	LO	250	N	Y	19910409	121846	246	298	65	61

TABLE 4.4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	MADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL	OR
80	77	ZAIRE	KWANGO RIVER	4.0S 17.5E	4.4S 18.0E	55	NV	250	N	Y	19910409	121850	246	298	64	61
80	78	ZAIRE	KASAI RIVER	3.5S 18.5E	4.7S 18.5E	50	NV	250	N	M	19910409	121901	246	298	64	61
80	79	ZAIRE	KASAI, LOANGE RIVERS	4.5S 19.5E	5.0S 19.0E	20	LO	250	N	Y	19910409	121909	246	298	63	61
80	80	ZAIRE	KASAI RIVER	4.5S 19.5E	5.1S 19.1E	30	NV	250	N	Y	19910409	121912	246	298	63	61
80	81	ZAIRE	AREA SOUTH OF KASAI R.	4.5S 19.0E	5.1S 19.2E	50	NV	250	N	Y	19910409	121914	246	298	63	61
80	82	ZAIRE	KASAI, LOANGE RIVERS	4.5S 20.0E	5.4S 19.7E	15	NV	250	N	Y	19910409	121924	246	297	62	61
80	83	ZAIRE	KASAI, SANKURU RIVERS	4.5S 20.5E	5.5S 20.0E	15	NV	250	N	Y	19910409	121928	246	297	62	61
80	84	ZAIRE	KASAI RIVER	5.0S 21.0E	5.6S 20.1E	10	NV	250	N	Y	19910409	121931	246	297	62	61
80	85	ZAIRE	KASAI RIVER	5.5S 21.0E	5.7S 20.2E	5	NV	250	N	Y	19910409	121933	246	297	62	61
80	86	ZAIRE	KASAI RIVER	5.5S 21.0E	5.8S 20.4E	20	LO	250	N	Y	19910409	121936	246	297	61	61
80	87	ZAIRE	KASAI RIVER	6.0S 21.0E	5.9S 20.5E	35	LO	250	N	Y	19910409	121939	246	297	61	61
80	88	ZAIRE	KASAI RIVER	6.0S 21.5E	6.0S 20.7E	70	LO	250	N	M	19910409	121943	246	297	61	61
80	89	ZAIRE	LULUA RIVER	5.5S 22.0E	6.1S 21.0E	30	NV	250	N	M	19910409	121948	246	297	61	61
80	90	ZAIRE	KASAI RIVER	7.5S 22.0E	6.6S 21.9E	30	LO	250	N	M	19910409	122004	246	297	60	61
86	92	ZAIRE	LAC UPEMBA AREA	8.5S 26.5E	9.5S 25.2E	50	LO	250	N	M	19910408	130013	245	291	47	48
86	93	ZAIRE	LAKE MWERU AREA	9.0S 28.7E	10.2S 26.4E	50	LO	250	N	M	19910408	130037	245	291	45	46
86	94	ZAIRE	LAKE TANGANYIKA		11.1S 28.1E	80	LO	250	N	M	19910408	130108	245	291	43	46
86	95	ZAIRE	LAKE TANGANYIKA		11.2S 28.3E	80	LO	250	N	M	19910408	130111	245	291	43	46
87	20	ZAIRE	KINSHASA, BRAZZAVILLE	4.1S 15.7E	3.1S 15.7E	75	LO	250	N	Y	19910409	121806	246	298	67	61
87	23	ZAIRE	CONGO RIVER/ESTUARY, CST	6.0S 12.5E	3.7S 16.8E	75	LO	250	U	M	19910409	121828	246	298	66	61
87	24	ZAIRE	CONGO RIVER, KWA RIVER	3.2S 16.2E	3.9S 17.1E	85	NV	250	N	Y	19910409	121834	246	298	65	61
87	25	ZAIRE	KWA RIVER, FINI RIVER	3.1S 16.8E	4.0S 17.3E	85	NV	250	U	Y	19910409	121837	246	298	65	61
87	26	ZAIRE	KWA R, FINI R, BANOUNDU	3.3S 17.3E	4.1S 17.4E	85	LO	250	U	Y	19910409	121840	246	298	65	61
87	27	ZAIRE	KASAI RIVER, RAINFOREST	3.5S 18.1E	4.2S 17.6E	85	LO	250	U	Y	19910409	121843	246	298	65	61
87	28	ZAIRE	KASAI RIVER, RAINFOREST	3.6S 18.6E	4.3S 17.8E	85	LO	250	U	Y	19910409	121847	246	298	65	61
87	29	ZAIRE	KWANGO R, WAMBA R, RNFRST	4.1S 17.1E	4.8S 18.7E	80	LO	250	N	M	19910409	121904	246	298	64	61
87	30	ZAIRE	DIBAYA-TUBWE, KASAI R.	4.4S 19.1E	5.4S 19.7E	30	LO	250	N	Y	19910409	121923	246	297	62	61
87	31	ZAIRE	PORT FRANQUI, KASAI R.	4.5S 20.6E	5.6S 19.8E	30	LO	250	N	Y	19910409	121926	246	297	62	61
87	32	ZAIRE	KASAI R, LULUA R, RNFRST	5.0S 21.0E	5.6S 20.1E	30	LO	250	N	Y	19910409	121930	246	297	62	61
87	33	ZAIRE	KASAI R, HILLS, RAINFOREST	5.8S 21.1E	5.7S 20.2E	30	LO	250	N	Y	19910409	121933	246	297	62	61
87	34	ZAIRE	LULUA R, LUEBO R.	5.6S 21.6E	5.8S 20.5E	30	LO	250	N	Y	19910409	121938	246	297	61	61
87	35	ZAIRE	SANKURU RIVER, DARK	3.8S 21.7E	6.3S 21.3E	80	LO	250	U	Y	19910409	121953	246	297	60	61
87	36	ZAIRE	DARK		6.8S 22.2E	80	LO	250	U	Y	19910409	122010	246	297	59	61
87	37	ZAIRE	SANKURU RIVER, DARK	4.0S 21.6E	7.0S 22.5E	80	LO	250	U	Y	19910409	122017	246	297	59	61
89	3	ZAIRE	LAKE ALBERT, ALBERT NILE	2.1N 31.3E	0.4S 33.1E	80	LO	250	U	Y	19910408	112142	245	288	66	45
89	4	ZAIRE	LAKE ALBERT, CLOUDS	1.2N 30.4E	0.6S 33.4E	80	LO	250	U	Y	19910408	112149	245	288	65	45
89	5	ZAIRE	LAKE ALBERT, CLOUDS	1.6N 30.7E	0.7S 33.5E	80	LO	250	U	Y	19910408	112151	245	288	65	45
89	40	ZAIRE	L. UPEMBA, L. LUKANGA	8.5S 26.5E	11.0S 28.0E	60	LO	250	U	Y	19910408	130106	245	291	44	46
89	41	ZAIRE	L. KABAMBA, LUALABA R.	7.9S 26.9E	11.2S 28.3E	60	LO	250	U	Y	19910408	130112	245	291	43	46
89	44	ZAIRE	LAKE MWERU	8.4S 29.0E	11.7S 29.2E	40	LO	250	U	Y	19910408	130128	245	291	42	46

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT LON	NADIR LAT LON	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM EL	OR
90	65	ZAIRE	CONGO RIVER	6.0S 14.0E	3.5S 10.6E	50	LO	250	N	N	19910406	141330	242	282	45	16
92	120	ZAIRE	NE ZAIRE NEAR LK ALBERT		1.9N 29.1E	70	LO	250	N	N	19910408	112026	245	286	70	45
92	121	ZAIRE	NE ZAIRE NEAR LK ALBERT		1.8N 29.3E	80	LO	250	N	N	19910408	112029	245	286	70	45
92	122	ZAIRE	NE ZAIRE NEAR LK ALBERT		1.7N 29.4E	90	LO	250	N	N	19910408	112031	245	286	70	45
92	123	ZAIRE	LAKE ALBERT AREA	1.9N 31.2E	1.8N 29.7E	70	LO	250	N	N	19910408	112037	245	286	69	45
152	19	ZAIRE	UBANGI R.-BANGUI	5.0N 19.5E	5.1N 19.8E	65	NV	250	N	Y	19910406	123525	243	274	62	15
152	20	ZAIRE	UBANGI RIVER	4.0N 20.0E	4.4N 21.0E	70	LO	250	N	Y	19910406	123546	243	275	60	15
152	21	ZAIRE	UBANGI R.-BUSINGA	3.5N 21.0E	3.9N 21.9E	70	LO	250	N	Y	19910406	123604	243	275	59	15
152	22	ZAIRE	LAKE EDWARD	0.5S 29.5E	0.8S 29.9E	85	NV	250	N	N	19910406	123838	243	281	50	15
153	OAC	ZAIRE	MBOMOU RIVER	4.5N 24.0E		75	LO	250	N	Y						
153	OAD	ZAIRE	MBOMOU RIVER	4.5N 23.5E		75	LO	250	N	Y						
153	OAE	ZAIRE	UELE RIVER	3.6N 25.5E		65	LO	250	N	N						
153	OAF	ZAIRE	WESTERN RIFT VALLEY	1.0N 29.5E		60	LO	250	N	N						
153	OAG	ZAIRE	LAKE ALBERT, RIFT VALLEY	1.5N 30.0E		50	LO	250	N	Y						
153	OAH	ZAIRE	LAKE ALBERT, RIFT VALLEY	2.0N 30.5E		50	LO	250	N	Y						
153	OAM	ZAIRE	AREA WEST OF L. ALBERT	1.0N 28.5E		80	HO	250	N	N						
74	73	ZAMBIA			18.5S 22.0E	5	LO	250	N	N	19910409	140043	244	293	36	62
74	74	ZAMBIA	RHODESIA AREA, KARIBA LK.		18.7S 22.4E	30	HO	250	N	N	19910409	140049	244	293	35	62
74	76	ZAMBIA	RHODESIA AREA		18.9S 23.1E	30	HO	250	N	N	19910409	140101	244	293	34	62
74	83	ZAMBIA			19.9S 25.6E	5	LO	250	N	N	19910409	140144	244	292	32	62
74	84	ZAMBIA			20.1S 26.0E	10	LO	250	N	N	19910409	140150	244	292	31	62
74	85	ZAMBIA			20.3S 26.5E	50	LO	250	N	N	19910409	140158	244	291	31	62
74	86	ZAMBIA			20.5S 27.1E	30	LO	250	N	N	19910409	140208	244	291	30	62
75	52	ZAMBIA	CLDY, HOLES OVER RIVERS		9.6S 21.6E	90	HO	250	N	N	19910406	141657	242	284	32	16
75	53	ZAMBIA	CLDY, HOLES OVER RIVERS		10.1S 22.5E	90	HO	250	N	N	19910406	141715	242	284	31	16
75	54	ZAMBIA	CLDY, HOLES OVER RIVERS		10.5S 23.3E	90	LO	250	N	N	19910406	141729	242	284	30	16
75	55	ZAMBIA	LAKE KARIBA	17.2S 27.6E	12.1S 26.2E	70	LO	250	N	N	19910406	141822	242	283	27	16
75	56	ZAMBIA	LUKANGA SWAMP	12.4S 26.9E	12.4S 26.9E	70	LO	250	N	N	19910406	141835	242	283	26	16
77	96	ZAMBIA	ZAMBEZI RIVER BASIN	10.3S 22.8E	10.3S 22.8E	70	LO	250	N	N	19910406	141721	242	284	31	16
77	97	ZAMBIA	ZAMBEZI RIVER	15.0S 23.0E	10.4S 23.1E	70	LO	250	N	N	19910406	141725	242	284	31	16
77	98	ZAMBIA	LAKE KARIBA	16.8S 28.0E	12.2S 26.4E	60	LO	250	N	N	19910406	141826	242	283	27	16
77	99	ZAMBIA	LAKE KARIBA	17.0S 27.7E	12.3S 26.6E	60	LO	250	N	N	19910406	141830	242	283	26	16
80	94	ZAMBIA	LIUWA PLAIN, ZAMBEZI R.	15.0S 23.0E	10.1S 28.2E	10	LO	250	N	Y	19910409	122203	245	296	52	61
80	95	ZAMBIA	LIUWA PLAIN, ZAMBEZI R.	16.5S 25.0E	10.3S 28.5E	5	LO	250	N	Y	19910409	122209	245	296	52	61
80	96	ZAMBIA	LUKANGA SWAMP	15.5S 27.0E	10.7S 29.2E	10	LO	250	N	Y	19910409	122222	245	296	51	61
80	97	ZAMBIA	LUKANGA SWAMP	16.0S 27.5E	10.9S 29.0E	5	LO	250	N	Y	19910409	122229	245	296	50	61
87	39	ZAMBIA	ZAMBEZI R/TRIBUTARIES	15.8S 26.0E	11.1S 30.0E	15	LO	250	N	N	19910409	122236	245	296	50	61
87	40	ZAMBIA	ZAMBEZI R/TRIBUTARIES	16.7S 24.2E	11.2S 30.3E	10	LO	250	N	N	19910409	122242	245	296	50	61
87	42	ZAMBIA	LAKE KARIBA, HILLS	17.5S 27.3E	11.7S 31.2E	10	LO	250	N	Y	19910409	122259	245	296	49	61
87	43	ZAMBIA	LAKE KARIBA, HILLS	17.6S 27.5E	12.2S 32.2E	10	LO	250	N	Y	19910409	122316	245	295	47	61

TABLE 4-4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Continued)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER LAT	CENTER LONG	MADIR LAT	MADIR LONG	CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUN EL	OR
89	42	ZAMBIA	LAKE MWERU	9.25	28.4E	11.4S	28.6E	70	LO	250	U	Y	19910408	130117	245	291	43	48
89	43	ZAMBIA	LAKE MWERU	9.15	28.8E	11.5S	28.8E	40	LO	250	U	Y	19910408	130121	245	291	43	46
89	45	ZAMBIA	CONVECTION CELLS			12.1S	30.1E	70	LO	250	U	N	19910408	130144	245	290	41	46
90	71	ZAMBIA	ZAMBEZI R/TRIB. CONVERGE	15.5S	23.0E	11.2S	24.5E	80	LO	250	U	N	19910406	141751	242	283	29	16
90	77	ZAMBIA	LUANGWA RIVER, DARK	12.7S	32.0E	14.8S	31.8E	50	LO	250	U	N	19910406	142003	242	283	21	16
152	52	ZAMBIA	ZAMBEZI RIVER	16.5S	22.5E	12.1S	26.3E	85	LO	250	U	Y	19910406	141825	242	283	27	16
152	53	ZAMBIA	ZAMBEZI RIVER	16.5S	22.5E	12.6S	27.3E	85	HO	250	N	Y	19910406	141843	242	283	26	16
152	54	ZAMBIA	LAKE KARIBA	17.5S	27.5E	13.6S	29.3E	30	LO	250	U	Y	19910406	141919	242	283	23	16
74	70	ZIMBABWE	VIEW TOWARDS LAKE KARIBA			18.0S	20.7E	10	HO	250	N	N	19910409	140021	244	293	37	62
74	77	ZIMBABWE	E. COAST LAKE KARIBA			19.1S	23.5E	60	HO	250	N	N	19910409	140108	244	292	34	62
74	80	ZIMBABWE	HWANGE NATIONAL PARK AREA	19.0S	27.0E	19.5S	24.6E	0	LO	250	N	N	19910409	140127	244	292	33	62
74	81	ZIMBABWE	LAKE KARIBA AREA	18.0S	28.0E	19.7S	25.0E	0	LO	250	N	N	19910409	140133	244	292	32	62
74	82	ZIMBABWE	SW. ZIMBABWE AREA			19.9S	25.4E	20	LO	250	N	N	19910409	140141	244	292	32	62
74	87	ZIMBABWE				20.6S	27.4E	30	LO	250	N	N	19910409	140214	244	291	30	62
74	88	ZIMBABWE				20.9S	28.3E	30	LO	250	N	N	19910409	140228	244	291	29	62
74	89	ZIMBABWE				21.3S	29.3E	40	LO	250	N	N	19910409	140246	244	290	28	62
74	90	ZIMBABWE	E. END OF LAKE KARIBA	16.3S	29.1E	21.7S	30.4E	30	LO	250	N	N	19910409	140304	244	290	27	62
74	91	ZIMBABWE	MTNS. AREA			22.6S	33.4E	50	LO	250	N	N	19910409	140352	244	289	24	62
74	92	ZIMBABWE	MTNS. AREA			22.7S	33.8E	50	LO	250	N	N	19910409	140358	244	289	23	62
75	57	ZIMBABWE	LAKE KARIBA	18.0S	29.0E	13.4S	28.8E	60	LO	250	N	N	19910406	141909	242	283	24	16
75	62	ZIMBABWE	LUNDI, SABI, & SAVE RIVERS	20.0S	32.3E	14.9S	32.1E	40	LO	250	N	N	19910406	142008	242	282	20	16
77	102	ZIMBABWE	LAKE KARIBA, E. END	16.7S	28.3E	13.4S	28.8E	30	LO	250	N	N	19910406	141910	242	283	24	16
77	103	ZIMBABWE	LAKE KARIBA, MIDDLE	16.9S	28.0E	13.5S	29.0E	30	LO	250	N	N	19910406	141914	242	283	24	16
77	104	ZIMBABWE	LAKE KARIBA, W. END	17.5S	27.4E	13.6S	29.3E	40	LO	250	N	N	19910406	141918	242	283	23	16
80	101	ZIMBABWE	KARIBA L., ZAMBEZI R.	19.0S	26.0E	12.0S	31.7E	5	LO	250	N	Y	19910409	122308	245	296	48	61
80	102	ZIMBABWE	KARIBA LAKE	19.0S	28.0E	12.1S	32.1E	0	LO	250	N	Y	19910409	122314	245	295	47	61
80	104	ZIMBABWE	S. OF LAKE KARIBA	19.0S	28.5E	12.6S	33.0E	0	LO	250	N	N	19910409	122332	245	295	46	61
87	44	ZIMBABWE	MATA R. SUA PAN	19.8S	27.4E	12.8S	33.4E	5	LO	250	N	N	19910409	122338	245	295	46	61
87	99	ZIMBABWE	L. KARIBA, PANORAMA SE	19.0S	31.0E	17.2S	18.9E	25	HO	250	U	N	19910409	135949	244	293	36	62
87	101	ZIMBABWE	MATABE HILLS, PANORAMA SE	21.0S	30.0E	17.5S	19.5E	50	HO	250	U	N	19910409	140000	244	293	35	62
87	102	ZIMBABWE	MASHABA MTNS, PANORAMA SE	20.0S	31.0E	17.6S	19.9E	50	HO	250	U	N	19910409	140007	244	293	35	62
87	106	ZIMBABWE	HILLS, PRAIRIE, PANOR. SE			18.3S	21.4E	0	LO	250	U	N	19910409	140032	244	292	33	62
87	109	ZIMBABWE	MASHABA MTNS, DARK	20.0S	30.0E	18.7S	22.4E	25	LO	250	U	N	19910409	140050	244	292	32	62
87	114	ZIMBABWE	EASTERN HIGHLANDS, V. DARK			20.0S	25.7E	60	LO	250	U	N	19910409	140145	244	291	28	62
87	115	ZIMBABWE	VERY DARK			20.4S	26.8E	30	LO	250	U	N	19910409	140204	244	290	27	62
87	116	ZIMBABWE	VERY DARK, HIGHLANDS			21.3S	29.2E	20	LO	250	U	N	19910409	140244	244	289	25	62
87	117	ZIMBABWE	VERY DARK, HIGHLANDS			21.7S	30.4E	70	LO	250	U	N	19910409	140304	244	289	23	62
90	74	ZIMBABWE	LAKE KARIBA, DARK	17.5S	27.5E	12.4S	26.9E	60	LO	250	U	N	19910406	141835	242	283	26	16
90	75	ZIMBABWE	SHANGANI/GWAI R-BASIN, OK	19.5S	28.0E	12.6S	27.2E	50	LO	250	U	N	19910406	141840	242	283	26	16
90	76	ZIMBABWE	LAKE KARIBA, DARK	17.0S	28.5E	13.0S	28.1E	35	LO	250	U	N	19910406	141857	242	283	25	16

TABLE 4.4.- STS-37 HANDHELD PHOTOGRAPHY SORTED BY GEOGRAPHIC NAME (Concluded)

RL	FR	GEOGRAPHIC NAME	FEATURE	CENTER		NADIR		CC	TL	FL	E	S	DATE	GMT	AL	AZ	SUM
				LAT	LOW	LAT	LOW										EL OR
96	46	ZIMBABWE	MAKARIKARI P., GREAT DIKE	20.0S	27.0E			10	LO	100	N	Y					
96	47	ZIMBABWE	MAKARIKARI P., GREAT DIKE	20.0S	28.5E			20	HO	100	N	Y					
152	55	ZIMBABWE	LAKE KARIBA, NITWETWE	18.5S	27.0E	14.3S	30.8E	30	LO	250	N	Y	19910406	141945	242	283	22 16
152	56	ZIMBABWE	LAKE KARIBA	18.0S	27.0E	14.5S	31.2E	30	LO	250	N	Y	19910406	141953	242	283	21 16
152	57	ZIMBABWE	MASHABA MOUNTAINS	19.0S	30.0E	16.1S	32.3E	30	LO	250	N	M	19910406	142012	242	282	20 16
152	58	ZIMBABWE	RIO SAVE	21.0S	32.0E	16.9S	34.0E	10	LO	250	N	Y	19910406	142043	242	282	18 16



1. Report No. JSC-25128	2. Government Accession No.	3. Recipient's Catalog No.	
4. Title and Subtitle Catalog of Space Shuttle Earth Observations Handheld Photography: Space Transportation System 37 (STS-37)		5. Report Date August 1991	
		6. Performing Organization Code	
7. Author(s) Raymond M. Nelson et al. Lockheed Engineering & Sciences Company		8. Performing Organization Report No. LESC-29483	
		10. Work Unit No.	
9. Performing Organization Name and Address Lockheed Engineering & Sciences Company Engineering and Science Program 2400 NASA Road 1 Houston, Texas 77058		11. Contract or Grant No. NAS 9-17900	
		13. Type of Report and Period Covered Technical Report	
12. Sponsoring Agency Name and Address National Aeronautics and Space Administration Lyndon B. Johnson Space Center, Houston, Texas 77058 JSC Technical Monitor: D. E. Pitts		14. Sponsoring Agency Code	
15. Supplementary Notes			
16. Abstract This document catalogs Space Shuttle handheld Earth observations photographs which were collected during the Space Transportation System 37 (STS-37) Mission of April 5 through 11, 1991. The catalog includes the following data for each of 4486 frames, 4283 of which are Earth looking: identification number, geographical name, feature description, latitude and longitude, percentage of cloud cover, tilt, lens focal length, exposure evaluation, stereopair availability, and orbit number. The catalog is a product of the Flight Science Support Office, Solar System Exploration Division, Space and Life Sciences Directorate, of the National Aeronautics and Space Administration, Lyndon B. Johnson Space Center. Catalogs are available from the Flight Science Support Office and the EROS Data Center.			
17. Key Words (Suggested by Author(s)) Handheld photography STS-37 Flight Science Support Office		18. Distribution Statement Unclassified - Unlimited	
19. Security Classif. (of this report) Unclassified	20. Security Classif. (of this page) Unclassified	21. No. of pages 245	22. Price*

\*For sale by the National Technical Information Service, Springfield, Virginia 22161